The State of Opportunity

Overcoming the wage crisis in today's labor market

indeed hiring lab

Today, many people feel that the labor market is polarizing, with high-paying opportunities going to a select few, middle-wage jobs disappearing, and low-wage jobs proliferating.

In this report, we find that the numbers support this feeling. Only 16% of the labor market is currently defying the trend toward low-pay, low-growth salaries. We identify these jobs, the educational and skills requirements associated with them, the sectors in which they are most common, and the locations where they are concentrated.

We also identify the reasons employers recruiting for these jobs find them so hard to fill, and we suggest solutions for the talent gap. Through this analysis, we uncover pathways to prosperity, while shining a spotlight on the present and potential future of the labor market.

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Introduction

The economic crisis is over, but the wage crisis persists

Although the global financial crisis ended years ago, dissatisfaction with the economy persists around the world. In the United States, despite a labor market recovery that has seen big payroll gains and the jobless rate cut in half, surveys show many people feel the recession never ended—and many employers complain that they struggle to fill roles. Meanwhile, in the US and Europe we see wild-card political candidates tapping into popular discontent, upending establishment figures and institutions.

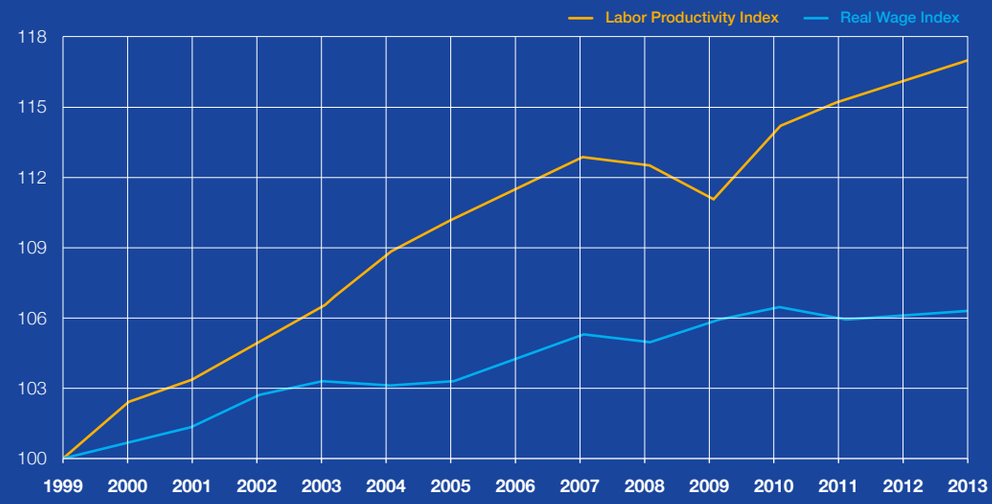
On a deep level, many people feel that the opportunities available to them are dwindling. This sense is perhaps confirmed by analysts who note that the economy is growing more "polarized," with a few high-skill, highly paid people at the top, and a large number of low-skill, poorly paid people at the bottom. Meanwhile the middle continues to shrink.

In fact, according to the US Census Bureau (2015), incomes have been stagnant in the US for three years in a row, following two years of big declines, while nearly 47 million Americans are living in poverty. Recent research from Pew Research Center (2016) found that in 2014 the median income before taxes had declined by 13% since 2004—even as expenditures had increased by almost 14%. In practice this means the average household in the bottom third of earners had $1,500 left after expenses in 2004 but were $2,300 in debt in 2014.

In other words, the economic crisis may be over, but the wage crisis persists—and this is a global trend. Even as productivity has risen worldwide, wages have remained stagnant, causing many to question whether this is a permanent feature of the post-recession economy. It's little wonder, then, that so many people are anxious about their futures.

Productivity in developed countries regains footing while wages flatten altogether

Real wages and labor productivity, index 1999=100



Source: ILO Global Wage Report 2014 – 15

In our rapidly changing global economy, governments, employers, and job seekers need to work together to foster and encourage a culture of innovation and adaptation. Only by identifying pathways to opportunity can we avoid the pitfalls of polarization and ensure a future where the economy continues to grow and provides widespread benefits.

In this study, we look at today's labor market and identify the jobs that are bucking the wage crisis. By taking a close look at the who, what, and where of these occupations, we can map out pathways leading away from wage stagnation, showing job seekers and employers the shape of opportunity in the 21st century.

Tara M. Sinclair, PhD
Chief Economist, Indeed

Section 1

16% of the labor market is beating the global wage crisis

Only 16% of current employment is seeing significant salary growth.

92% of these “opportunity jobs” are in just five broad occupational categories.

Nearly 85% of tech job postings are opportunity jobs.

Defining opportunity

Opportunity means different things to different people. For one, it’s an internship at a major firm holding the promise of future advancement. For another, it’s a chance to work in a field close to a personal passion. But for many more, opportunity means something essential: it’s the ability to comfortably support themselves and their families. Attaining such security means not only being paid a certain salary but also seeing that salary keep pace with purchasing power over time.

For this study, we viewed opportunity through the lens of high pay and income growth, identifying occupations that have defied the downward pressures of the wage crisis. These jobs represent pathways forward, and indicate the skills and experience necessary for those who wish to escape the trend toward paychecks with stagnant or declining purchasing power.

To identify “opportunity jobs,” we analyzed US Bureau of Labor Statistics (BLS) Standard Occupational Classifications data, which cover every type of work performed for pay or profit. At the most granular level, the BLS breaks today’s workplace down into over 800 occupations. To qualify as an opportunity job, an occupation had to demonstrate two qualities:

1. Increasing purchasing power—i.e. salary growth greater than 25.3% from 2004 to 2014.

Since the global financial crisis, slow wage growth has made jobs with rising salaries the exceptions rather than the rule. Therefore we defined an opportunity job as one with a salary that has recorded growth over the past ten years, even after adjusting for inflation. The threshold is set equal to the amount by which the Consumer Price Index inflation measure increased between 2004 and 2014.

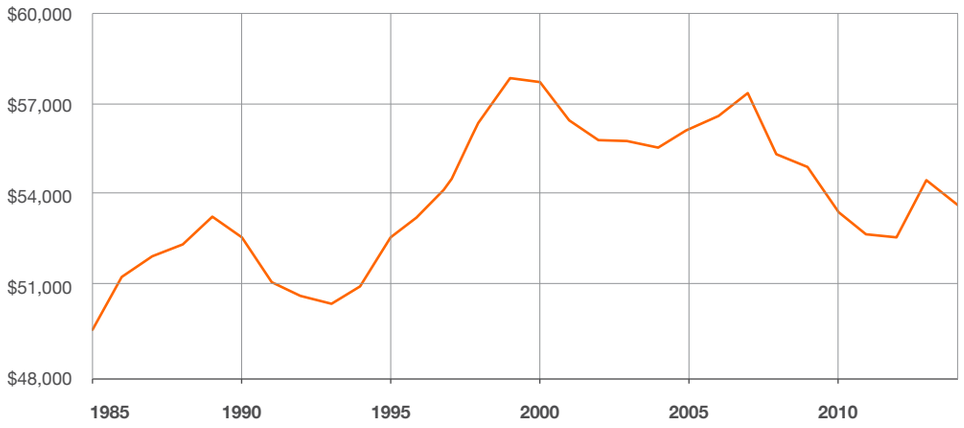
2. High pay—i.e. an average salary in 2014 higher than $57,700.

“Good pay” can have a range of definitions. We focused on jobs paying more than $57,700, the purchasing power of the median household in 2000 (in 2014 dollars). Typically we expect household income to grow over time, and although it has grown in nominal terms, the purchasing power of the median household in the US has declined not just since the financial crisis, but since the beginning of this century. A well-paying job is thus defined as one that still has at least the purchasing power of the median household in 2000.

After applying those two salary filters, we found that only 170 occupations out of a total of 800 met the criteria of a stagnation-defying opportunity job. That amounts to a mere 16% of 2014 total employment, according to BLS (2016a) data.

US incomes on the decline

Real median income, 2014 dollars

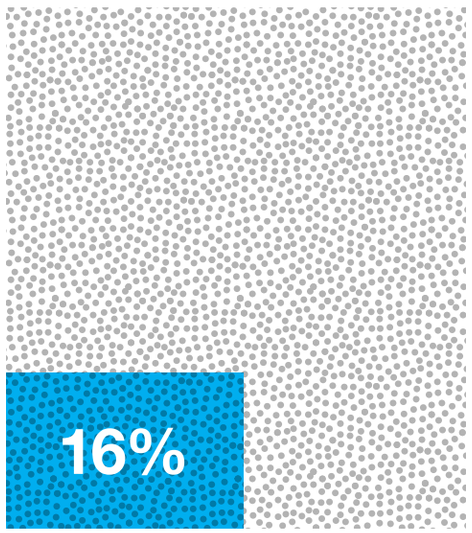


Source: U.S. Census Bureau

Opportunity jobs only 16% of US employment

Opportunity jobs vs. all other jobs

With such a low percentage of jobs providing a household-supporting wage with growing purchasing power over time, it is hard to dispute that we are living in a highly polarized, “best versus the rest” economy. While the share of opportunity jobs has increased slightly in the past 11 years (up to 16% from 13% in 2004), such gains are modest. This is an average measure, and while there are certainly exceptions, the results suggest the global wage crisis will likely continue throughout 2016 and beyond.



Opportunity Jobs All Jobs

Opportunity jobs at a glance

Summarizing the main characteristics of occupations resisting the pressures of the wage crisis.

	Opportunity Jobs[1]	Other Jobs
Share of labor market	15.6%	85.4%
Share of job postings in which employer demand outstrips job seeker interest	71.3%	54.1%
Share of job postings at high risk of automation	8.8%	45.7%
Share of jobs requiring a 4-year degree	73.9%	13.8%
On a scale of 1 to 100, importance of:		
• Computer and electronics knowledge	60.4	45.3
• Complex problem solving	63.8	50.5
• Social skills	57	48.8
On a scale of 1 to 100, transferability of skills across industries	56.9	53.1
Top 5 occupations in each category, by quantity of job postings	1. Registered nurses 2. Sales managers 3. Computer occupations 4. Misc. Managers 5. Accountants and auditors	1. Heavy and tractor-trailer truck drivers 2. Customer services representatives 3. Web developers 4. Miscellaneous sales representatives, services 5. Childcare workers

[1] For detailed profiles of individual opportunity jobs, see Section VIII.

Opportunity jobs are made up of many high-skill roles

What precisely are these opportunity jobs? The table shows the 25 occupations with the most postings on Indeed that met our criteria.[2]

Top 25 opportunity jobs

Opportunity jobs ranked by quantity of job postings

01 Registered Nurses

02 Sales Managers

03 Misc. Computer Occupations

04 Misc. Managers

05 Accountants And Auditors

06 Software Developers, Applications

07 Physical Therapists

08 Network And Computer Systems Administrators

09 Medical And Health Services Managers

10 Computer And Information Systems Managers

11 Marketing Managers

12 Physician Assistants

13 Software Developers, Systems Software

14 Speech-Language Pathologists

15 Computer Systems Analysts

16 Architectural And Engineering Managers

17 Occupational Therapists

18 Human Resources Managers

19 Sales Engineers

20 Financial Managers

21 Administrative Services Managers

22 Industrial Production Managers

23 Family And General Practitioners

24 Database Administrators

25 Operations Research Analysts

[2] For the full list, see the appendix on page 88.

Although that is quite a diverse list, even a quick look reveals a heavy concentration of high skill roles. These are not jobs just anybody can walk into; many are highly specialized. However, there is more linking these opportunity jobs together than the high-skill, high-pay combination alone. Other characteristics also set them apart.

In fact, opportunity jobs consistently outperform other jobs when it comes to these three measures:

1. Long-term viability

Opportunity jobs have a lower average risk of automation than other jobs. For instance, registered nurse jobs have long-term career viability because the high degree of social interaction required makes it unlikely machines will replace humans in this role. Many other opportunity jobs require similar empathetic or creative qualities. For more information, see methodology on page 106.

2. Transferability of skills

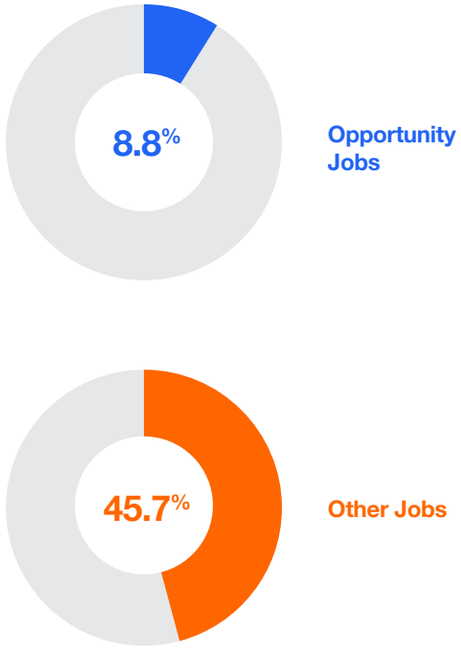
Opportunity jobs are more widely dispersed across industries, making it easier for people to find other work if their segment suffers a downturn. For instance, statistician jobs are more downturn resistant because their skills can be applied across multiple industries, from manufacturing to healthcare to retail. For more information, see methodology on page 107.

3. Talent mismatch

The opportunity jobs market is more of a job seekers' market. Employers have even higher rates of unfilled opportunity jobs than other jobs. For instance, speech-language pathologist roles, which are opportunity jobs, are much harder to fill than lawyer positions, a job that isn't meeting the wage growth requirements for opportunity jobs. In the legal profession, an excess of lawyers has flattened the job market.

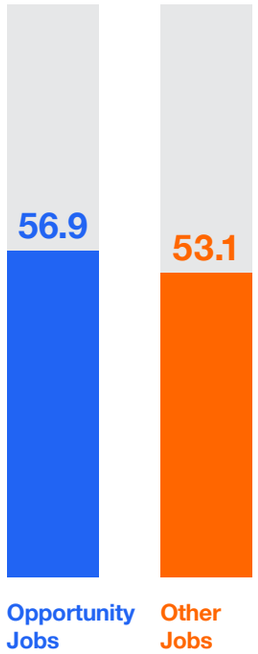
Only 8.8% of opportunity job postings are at high risk of automation

Comparison of risk of automation of opportunity jobs vs. other jobs



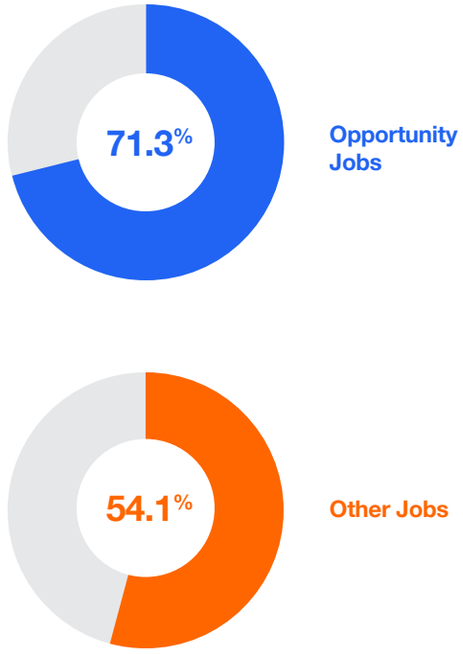
Opportunity job postings are more downturn resistant

Transferability of skills for opportunity jobs vs. other jobs rated on a scale of 1-100.



Talent supply/demand gap is more in job seeker's favor in opportunity jobs

Share of occupations with job seeker shortage



We also found that opportunity jobs are heavily concentrated in a handful of fields. When we analyzed the 21 broadest occupational categories (excluding military and farming jobs), we found that 92% of all opportunity job postings are concentrated in just five categories. The remaining 8% are spread across everything from education to protective services.

But even within the five dominant categories, the concentration of opportunity jobs varies greatly. In computer and mathematical occupations, for instance, the vast majority of job postings are well-paid "stagnation-busters." When it comes to business and financial operations, the concentration drops below two-thirds. This is still significant: No other category has more than 50% of job postings that meet our opportunity criteria.

92% of opportunity jobs are concentrated in 5 categories

Occupation categories ranked by quantity of opportunity job postings

1	Healthcare Practitioners and Technical
2	Management
3	Computer and Mathematical
4	Business and Financial Operations
5	Architecture and Engineering

In those 5 categories, the majority of postings are opportunity jobs

Occupation categories ranked by opportunity job postings as a share of all postings

1	Computer and Mathematical	83.8%
2	Architecture and Engineering	81.5%
3	Management	76.0%
4	Healthcare Practitioners and Technical	76.0%
5	Business and Financial Operations	59.0%

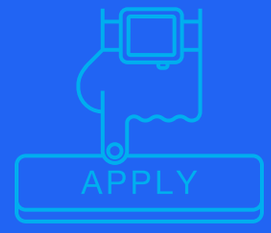
Having identified the "what" of opportunity jobs, in the next section we will explore the "who"—the education and skills backgrounds required of job seekers.

Section 2

How difficult is it to get an opportunity job?

75% of opportunity job postings require a college education.

In some fields, the value of a skills specialization has been detrimental to wage growth—for instance, lawyers appear on our list of high-skill jobs failing to defeat wage stagnation.



Millennials are less likely to click on opportunity jobs than any other age group.

Educational requirements of opportunity jobs

Our analysis of opportunity jobs quickly revealed the crucial importance of education. A look at job advertisements showed 75% of opportunity job postings are in categories typically requiring a college education, compared with 14% of "other" job postings.

To put that 75% figure in perspective, consider the following:

- Today, more jobs than ever require a 4-year degree. Our analysis of BLS data indicates that from 2004 to 2014, the share of jobs requiring higher education increased from 23% to 27%.
- During the same period, the percentage of people in the labor market working jobs that require a high school diploma fell from 41.5% to 37.8%.
- Only 30% of the US population has a college degree (BLS, 2016b).

Increasingly, opportunity demands an up-front investment in education from job seekers. Even so, a degree alone does not guarantee membership in the fortunate minority at the top of the polarized labor market. Far from it: As we saw in Section 1, opportunities are concentrated strongly in five job categories, some of them requiring very specific educational backgrounds.

In fact, it is feasible to emerge from college with a degree and find a job that will lock you into a career with underperforming wages, as the table to the right indicates. Some of these jobs are management roles which may require experience plus a college degree. Others may be jobs where people are passionate about the work even with the underperforming pay.

Top 10 "other" jobs for college graduates

Non-opportunity jobs ranked by quantity of job postings

1	Miscellaneous sales representatives, services
2	General and operations managers
3	Management analysts
4	Instructional coordinators
5	Construction managers
6	Clinical, counseling, and school psychologists
7	Market research analysts and marketing specialists
8	Social and human service assistants
9	Insurance sales agents
10	Graphic designers

Gone are the days when a college degree could guarantee financial security. It is increasingly important for job seekers to think carefully about the career paths that their studies will lead them to. It is also important for policymakers and educators to let the upcoming generation of job seekers know how much the world has changed, and for employers to be explicit and vocal about the types of qualifications they expect to see.

Top 10 opportunity jobs for those without a college degree

Opportunity jobs ranked by quantity of job postings

1	Registered nurses
2	Administrative services managers
3	Electrical and electronics engineering technicians
4	Police and sheriff's patrol officers
5	Respiratory therapists
6	Stationary engineers and boiler operators
7	Electrical power-line installers and repairers
8	Construction and building inspectors
9	Postmasters and mail superintendents
10	Ship engineers

Meanwhile, although opportunity jobs for people without college degrees are in the minority, they do exist. In fact, 25% of opportunity jobs do not require a college education and offer better pathways out of wage stagnation than many that do. Still, even these jobs tend to be skilled trades that require an extra certification beyond a high school diploma.

Skills & experience

Formal education is only part of the story; opportunity jobs also demand more skills and experience. For instance, only 27% of opportunity job postings on Indeed do not ask for specific experience requirements, compared with 64% of other postings. This does not mean those employers are not looking for experienced candidates—only that they are not listing what that experience should be.

To get a clearer sense of the skills required by opportunity jobs, we looked at the National Center for O*NET Development (2016) skills data, which measures the importance of different skills for successful performance in each occupation, and then took the weighted average based on postings.

Opportunity jobs vs. other jobs

Skill importance measured on a scale of 1–100

	Computer & Electronics Knowledge	Complex Problem Solving	Social Skills
Opportunity Jobs	60.4	63.8	57.0
Other Jobs	45.3	50.5	48.8

The results show that opportunity jobs not only require more advanced tech and problem-solving skills but also demand greater social skills. The ideal candidate for an opportunity job must be familiar with software but also equipped with a high degree of emotional intelligence.

In short, employers are asking for a lot—and this likely explains why wages have consistently defied stagnation in these occupations. For job seekers, finding a path that leads away from the bottom end of the polarized labor market means pursuing constant self-improvement and formal learning, and cultivating a broader set of skills. For employers, though, it means the jobs are difficult to fill.

This is one of the paradoxes of opportunity: While 35% of job postings are for opportunity jobs, only 27% of all clicks are going to them. Although they pay better, the talent gap persists. This suggests the higher rates of compensation employers dedicate to these roles might still not entice enough candidates. It also suggests we might see more polarization before we see less if employers continue to increase wages in these roles to fill them. Meanwhile, if employers are hoping the tech-savvy millennial generation will take all those unfilled posts, they may need to think again.

Breaking down the demographics

The demographic data on who precisely is searching for opportunity jobs has important ramifications for employers.[3]

Gen Xers are marginally more interested in opportunity jobs

Clicks to opportunity jobs as a share of all clicks

Millennials	Gen Xers	Boomers
20.5%	24.5%	24.0%

Job seekers of all ages tend to click on opportunity jobs requiring college degrees

Clicks to opportunity jobs across educational requirements

Job Requirements	Millennials	Gen Xers	Boomers
High School Diploma	0.3%	0.3%	0.3%
Associate Degree	14.5%	15.8%	18.2%
Bachelor's Degree	69.0%	67.2%	64.6%
Postgraduate Degree	16.2%	16.7%	16.9%

[3] The generations are defined as follows: Millennials were born after 1980. Generation Xers were born 1965–1980. Baby boomers were born 1946–1964 (Pew Research Center 2015).

Millennials have the smallest share of clicks to opportunity jobs: 20.5% compared with 24.5% for generation X, and 24.0% for baby boomers. While jobs requiring a bachelor's degree dominate searches for all generations, boomers show relatively more interest in jobs requiring a postgraduate degree and in jobs that do not require a college degree.

As for computer and mathematical occupations, previous Indeed Hiring Lab research on the generational differences in job search revealed millennials are less interested in these jobs than other demographics, particularly generation Xers (Indeed 2014).

This could reflect disinterest or a degree of self-selection. Since millennials are the youngest age group, many of them may lack the higher levels of experience required by opportunity jobs and so are not applying. Whatever the reason, it is clear that the generation closest to retirement will not immediately be replaced by the generation furthest from it, meaning the supply/demand gap for employers offering opportunity jobs is likely to persist—especially since the group in between, generation X, is a smaller generation.

Find new ways of identifying and cultivating talent

What does this mean for employers? In short, they will need to work to make their jobs more attractive. In our previous report *Beyond the Talent Shortage*, we found that increased flexibility is one way employers can incentivize top tech talent (Indeed 2015). But opportunity is not restricted to tech talent alone. Employers need to ask deep questions to identify the talent they need.

For instance, a college degree is not the only way employers can measure job seeker potential. Some firms, including Ernst and Young in the UK and Ireland and the publisher Penguin, view the requirement as limiting and recently dropped it from job descriptions, preferring to focus on alternative indicators of talent (The Atlantic 2015).

Employer investment in training has been declining for decades, but it may finally be necessary to reverse that trend. Rather than wait for perfect candidates to walk through the door, employers will need to augment the skill sets of new hires with training so they can take on opportunity jobs with confidence.

Micro-courses in tech such as Codecademy may show the way forward: As this form of learning spreads to other fields, we may increasingly find that talent development is the new talent acquisition.

Section 3

Mapping opportunity jobs in English-speaking labor markets

The US has the highest number of new opportunity jobs available in the countries we studied—but it has a below-average concentration of them.

Within the US, the District of Columbia, Maryland, Washington, California, and Alaska have the highest concentrations of opportunity job postings.

Ireland has the highest concentration of opportunity job postings as a share of all job postings in any of the countries under study.

So far we have focused on identifying opportunity jobs and their requirements. In this section we look at where they can be found.

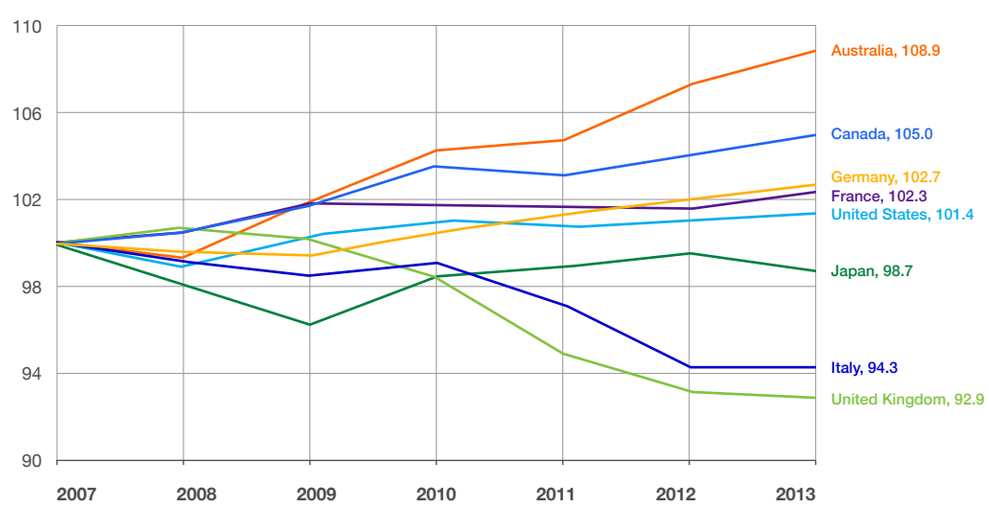
In many advanced economies, wages have performed poorly for years. Among developed countries, only Australia and Canada have made substantial gains in real terms since 2000, while in other countries, wages have flatlined or declined.

This is particularly striking in the US and the United Kingdom, where despite strong gains in employment, average wage growth has been low by historical standards since 2010. In fact, when adjusted for inflation, UK wages have declined despite a relatively robust economy.

Nevertheless, in all these countries some employers are creating stagnation-defying opportunities for job seekers, although some countries are home to more opportunities than others.

Wage stagnation is a global trend

Average real wage index for developed G20 countries, 2007=100



Source: ILO Global Wage Report 2014-15

Over 50% of new opportunity jobs available in the US are located in just nine states

When we rank US states by quantity of new opportunity jobs, measured by job postings, the results align closely with population. California ranks first, Texas second, and so on. In fact, although over 50% of all new opportunity jobs in the US are located in just nine states, those nine states contain 48% of all job postings, so the overall difference between the two numbers is not stark.[4]

But the picture changes when we look at the concentration of new opportunity jobs available in each state. Here we see that when it comes to defeating wage stagnation and providing opportunity jobs, all states are not created equal.

By this measure, the District of Columbia, with a population of 658,893, vaults over states with populations in the tens of millions (US Census Bureau 2014). In fact, in DC, over 50% of postings are for opportunity jobs, thanks to its knowledge-based economy.

Texas, which ranks second for opportunity jobs by volume, is absent from the top 10 for concentration. New York, with all its finance, insurance and healthcare jobs, ranks lower for stagnation-defying jobs than snowy, sparsely populated Alaska.

[4] See appendix on page 27 for the full list.

Top 10 US states by share of opportunity jobs

States ranked by opportunity job postings as a share of all postings

01.
Washington DC
55.5%

06.
New York
42.1%

02.
California
43.9%

07.
New Mexico
42.0%

03.
Washington
43.7%

08.
Massachusetts
42.0%

04.
Maryland
43.1%

09.
Virginia
41.9%

05.
Alaska
42.2%

10.
New Jersey
40.6%

Most common opportunity jobs in the top 5 opportunity states

Opportunity jobs with the most postings in each state

State	Most Common Opportunity Jobs
Washington DC	Computer and Mathematical Occupations
California	Management Occupations
Washington	Healthcare Practitioners and Technical Occupations
Maryland	Computer and Mathematical Occupations
Alaska	Healthcare Practitioners and Technical Occupations

Closer analysis of the data reveals healthcare is the major creator of opportunity jobs in Alaska and Washington state. By contrast, computer and mathematical jobs make up the greatest share of opportunity job postings in Maryland, perhaps due to the prominence of the defense industry in the local economy. The prevalence of tech firms in Silicon Valley does not have a similar impact on Californian opportunities: Management is the primary creator of opportunity jobs in the Golden State.

Americans have traditionally been willing to move in pursuit of opportunity, but in the 21st century, the old adage “go west, young man” no longer applies. A more data-driven formulation might be: “Go north, south, east, or west, people of every demographic, but only after thinking carefully about how your education and skills background intersect with your planned career path”—a less catchy but more accurate precept.

What the geographic concentration of opportunity means for employers

Just as there are states where job seekers have more choice among types of opportunity jobs, there are states where employers will find that talent is in especially short supply. We see a gap between talent supply and employer demand as measured by click to postings mismatch in every state.

But the gap is more pronounced in some states than in others. In fact, three of our top five states for concentration of opportunity jobs also make the top 10 for gap between supply and demand: New Mexico, Alaska, and Virginia.

New Mexico, Nevada and Alaska lead talent shortage for opportunity jobs

Share of clicks to opportunity jobs / share of postings for opportunity jobs

Greatest Talent Supply Gap	Smallest Talent Supply Gap
New Mexico	Minnesota
Nevada	Indiana
Alaska	Colorado
Wyoming	Utah
Connecticut	South Dakota
North Dakota	Hawaii
Maryland	Iowa
Michigan	Alabama
Virginia	Nebraska
Georgia	West Virginia

Employers in states suffering an especially large talent gap will need to develop strategies to recruit the high-skill workers they need. One way to do this is by recruiting talent from states that are talent rich or, in sectors where it is possible, enabling greater flexibility for remote working from an alternative location.

Is the UK the promised land for opportunity job seekers worldwide?

In addition to the US, we focused our attention on four other English-speaking countries (the UK, Canada, Ireland, and Australia). We also looked at two international city states, Singapore and Luxembourg, and one autonomous territory, Hong Kong, where a large share of postings are in English.

When we look at opportunity jobs by quantity, we discover that the US and UK are home to approximately 90% of the opportunity jobs on Indeed in the countries studied. They are also, of course, the most populous countries in the study. But when we look at opportunity jobs as a share of all job postings, a more complex picture emerges.

Countries ranked by concentration of opportunity jobs

Opportunity job postings as a share of all job postings

Country	Concentration of Opportunity Jobs
Ireland	50.4%
United Kingdom	44.8%
Australia	37.0%
United States	36.0%
Canada	30.3%

When it comes to concentration of opportunity jobs, Ireland leaps into first position, closely followed by the UK. Although the US may lead by quantity—it has over 60% of all the world's opportunity jobs on Indeed—it is a very different story when we break the results down proportionally.

While Ireland's position at the top may surprise some, it reflects a number of factors. In 2016 Ireland has one of the fastest-growing economies in the EU and employment is rising, while more than 700 major US companies are based in the country. Many of them are from the tech and healthcare sectors which—as we have seen—are major creators of opportunity jobs. Microsoft, Dell, Oracle, Facebook, Intel, Pfizer, and Google all have major offices in Ireland (American Chamber of Commerce Ireland 2016).

The UK's position illustrates the severity of polarization in that country. While there may be more opportunity jobs for people with the right skills, the average wage level in the UK declined between 2007 and 2013. Nor are jobs distributed equally throughout the country. In fact, 25% of British opportunity jobs are in London, although only 13% of the UK population lives there (Office for National Statistics 2015). For those living in the capital, the numbers are more reassuring: 51% of all London job postings are opportunity jobs.

This also helps explain why so much migration in the EU had historically headed to the UK. As previous Indeed Hiring Lab research revealed, Britain was consistently the first or second choice for job seekers within Europe looking for work overseas (Indeed 2016). After the UK's vote to leave the EU, however, we're watching carefully to see if job seeker interest changes.

In 2015, around 37% of searches for foreign employment within EU15 countries were for positions in the UK, compared with just 12% for next-placed France and Germany. By contrast, of the 1.5% of Britons searching for work overseas, only 15% of them are looking in the EU15.

As for the "city states," they outperform the countries on our list when it comes to concentration of opportunities. As with the District of Columbia in the US, this is most likely a reflection of their knowledge-based economies.

City states/autonomous territories ranked by concentration of opportunity jobs

Opportunity job postings as a share of all job postings

City State/Autonomous Territory	Concentration of Opportunity Jobs
Luxembourg	62.8%
Singapore	55.7%
Hong Kong	52.3%

However, not all those opportunity jobs are permanent: Over one in four opportunity jobs in the UK comes with a temporary contract (27%). The same figure is only 4% in the US and 2.5% in Hong Kong. And while Canada lags behind in concentration of opportunity jobs, the English-speaking part of the country offers the highest probability of having a good job with a part-time work arrangement (followed by the US and Australia). Registered nurses, sales managers and accountants/auditors are the most common opportunity jobs by quantity of job postings in the countries under study, with demand for registered nurses strongest in Britain and Ireland.

Top 10 international opportunity jobs

Opportunity jobs ranked by quantity of job postings

United Kingdom	Australia	Canada	Ireland	Hong Kong	Luxembourg	Singapore
Registered nurses	Sales managers	Sales managers	Registered nurses	Sales managers	Accountants and auditors	Sales managers
Computer occupations	Accountants and auditors	Computer occupations	Misc. computer Occupations	Marketing managers	Financial managers	Accountants and auditors
Sales managers	Computer occupations	Registered nurses	Accountants and Auditors	Accountants and auditors	Computer occupations	Marketing managers
Misc. managers	Registered nurses	Accountants and auditors	Sales managers	Financial managers	Marketing managers	Chief executives
Accountants and auditors	Misc. managers	Misc. managers	Misc. managers	Human resources managers	Computer and information systems managers	Computer occupations
Marketing managers	Marketing managers	Software developers, applications	Software developers, applications	Computer systems analysts	Compliance officers	Sales engineers
Administrative services managers	Administrative services managers	Marketing managers	Marketing managers	Computer and information systems managers	Software developers, applications	Computer and information systems managers
Sales engineers	Medical and health services managers	Financial managers	Software developers, systems software	Misc. managers	Information security analysts	Human resources managers
Software developers, applications	Computer and information systems managers	Human resources managers	Administrative services managers	Sales engineers	Network and computer systems administrators	Financial managers
Human resources specialists	Human resources managers	Computer and information systems managers	Computer and information systems managers	Computer occupations	Information security analysts, web developers, and computer network	Misc. managers

Conclusion

The long view of the economy

The wage crisis is ongoing, and the polarization of the labor market continues. Nobody can say how long this will last, but pathways to opportunity and prosperity exist. Meanwhile, advances in technology and the emergence of new industries are transforming the workforce in ways we could not have predicted. Taking the long view of economic history, a strong economy should bring more people into opportunity.

Humans are a creative species, after all. For millennia, most of the human race toiled in agriculture but the Industrial Revolution disrupted that ancient model. In 1900, agriculture accounted for 41% of US jobs; by the year 2000 that number had dropped to 1.9% (Dimitri, Effland, and Conklin 2005). In the last four decades alone we have seen employment transform immensely, largely due to the rise of the information economy. The kinds of work we can pursue are vast, varied, and ever expanding. As a result of these changes, large numbers of the population today live more comfortably than their ancestors.

The size of the economy is not fixed, and today new opportunities and new jobs are emerging. On Indeed, we regularly see new technologies introduce demand for new kinds of work, not just in the tech sector but broadly across the labor market. Online micro-learning platforms also indicate the new ways the workforce will gain the skills it needs to prosper.

And so as we look to the future of the workplace, job seekers and employers alike face a choice. They can wait for things to get better and hope everything turns out all right, or they can actively seek the opportunities that lead to prosperity and strive to create more of them so that everyone can benefit.

Let’s choose the second path.

Appendices

Contents

Postings growth

Raw percent growth in job postings for each occupation from Q4 2014 to Q4 2015.

Salary and salary growth

Salary is the average salary for each occupation in 2014. Salary growth is the growth rate for salary from 2004 to 2014. As these jobs are all opportunity jobs, salaries in the following profiles are necessarily greater than $57,700 and sustained a salary growth rate greater than 25.3%.

Degree of mismatch

Mismatch is measured by dividing the share of clicks to postings in each occupation by the share of postings. A value greater than one means that job seeker supply is greater employer demand. Less than one means that employer demand outstrips job seeker supply.

Automation risk

This measure indicates the likelihood that job functions will become automated over the next 20 years. Automation risk is measured on a scale of 0 to 1 (0 to .3 = low risk, .3 to .7 = medium risk, .7 to 1 = high risk).

Educational requirement

Educational attainment recommended for the position (Zone 1 = less than high school, Zone 2 = high school degree, Zone 3 = associate degree/some college, Zone 4 = bachelor's degree, Zone 5 = post graduate degree)

Transferrable skills score

This score measures the occupational dispersion across industries on a scale of 0 to 100 (0 = concentrated in a single industry, 100 = evenly dispersed across all industries).

Skills score

Importance of the skill for daily job functions on a scale of 0 to 100 (0 = skill not necessary, 100 = skill is vital).

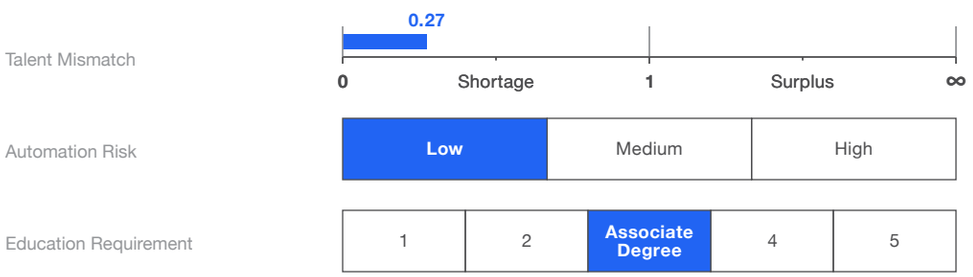
1. Registered Nurses

Key takeaways

- Registered nurses rank as the #1 opportunity job by volume of postings and postings growth
- Among the top 25 opportunity jobs, registered nurses rank 25th for salary and 25th for salary growth

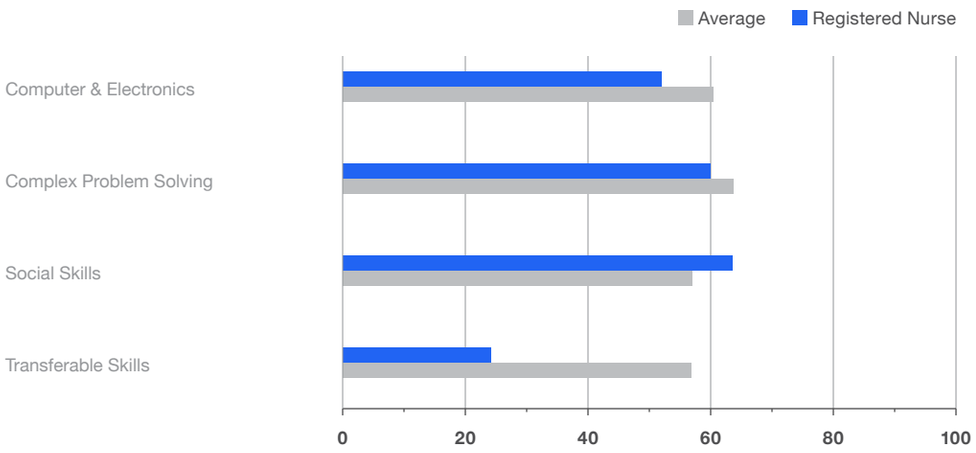
Sample job titles

- Registered nurse
- RN
- Travel registered nurse



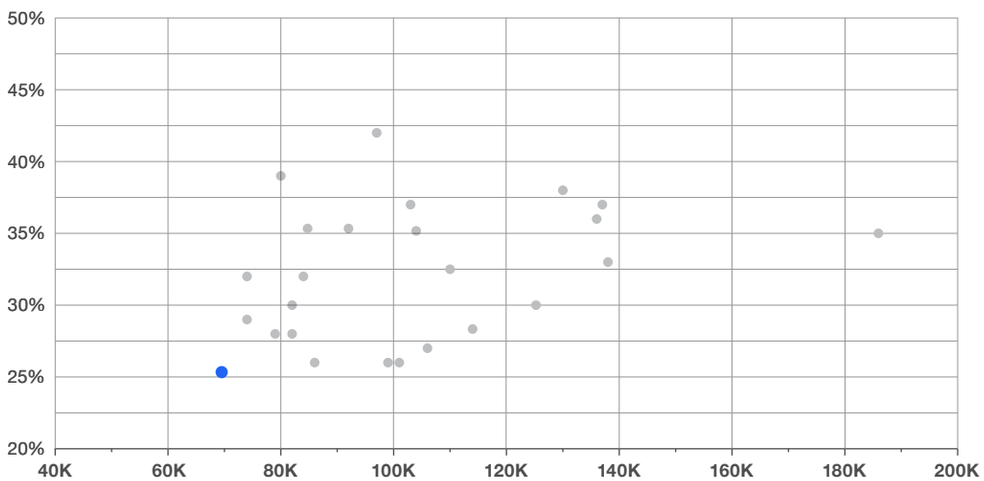
Skills

Registered nurse occupations have a relatively low transferable skills score, as these kinds of jobs are typically very specialized. These jobs have below average computer and electronics and complex problem solving skills requirements. They require slightly above average social skills.



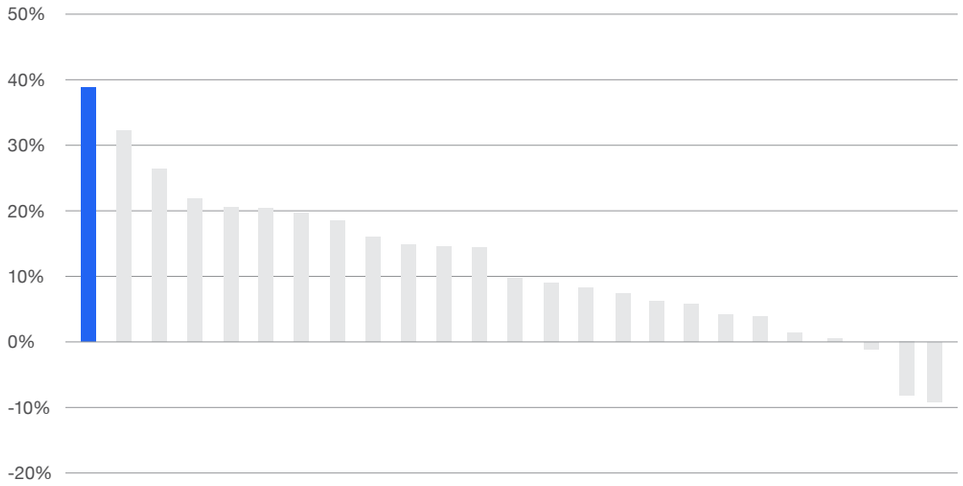
Salary and salary growth

Average annual salary for registered nurses is $69,790, salary growth is 25.3%.



Job postings growth

Among the top 25 opportunity jobs, postings for registered nurses are growing at the fastest rate.



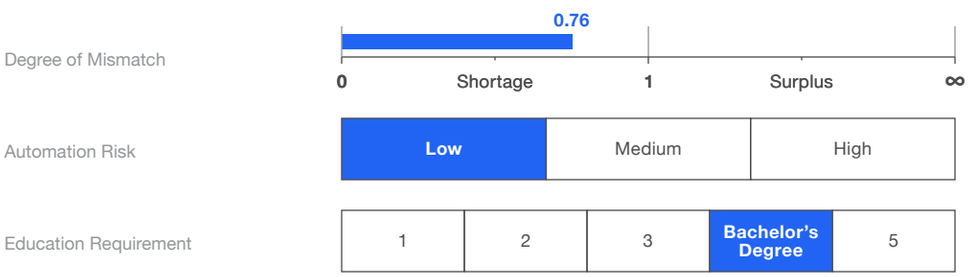
2. Sales Managers

Key takeaways

- Sales managers rank as the 10th opportunity job by postings growth and 2nd for volume of postings
- Among the top 25 opportunity jobs, sales managers rank 6th for salary and 16th for salary growth

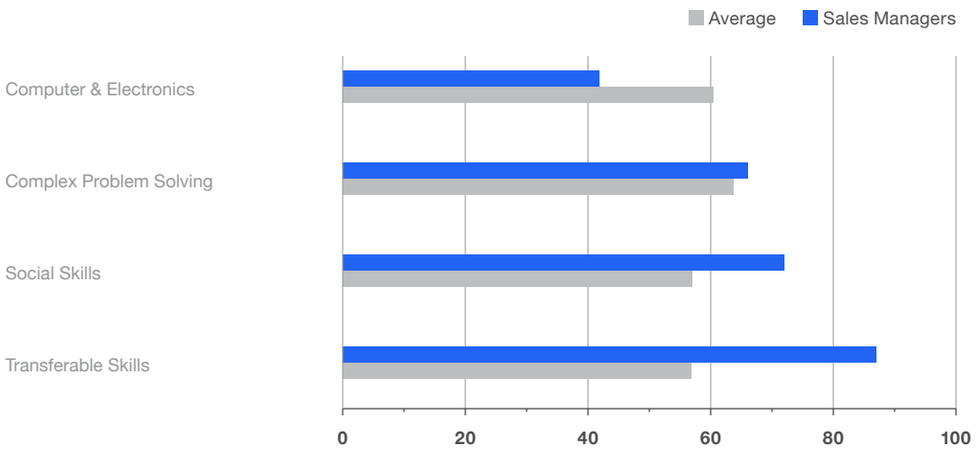
Sample job titles

- Sales manager
- Sales lead
- Sales representative



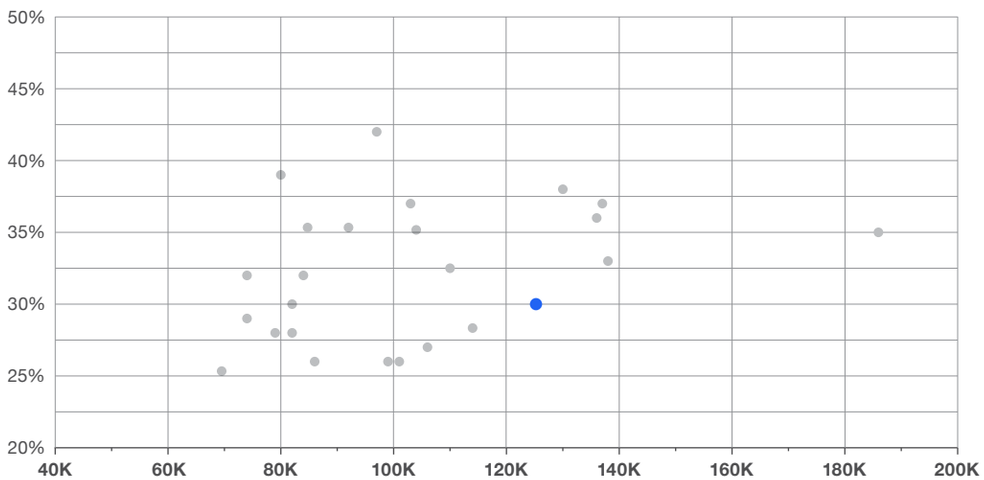
Skills

Sales manager occupations have a high transferable skills score, meaning skills used on the job are broadly applicable to many other types of work. These jobs have below average computer and electronics skills requirements, but above average scores for complex problem solving and social skills.



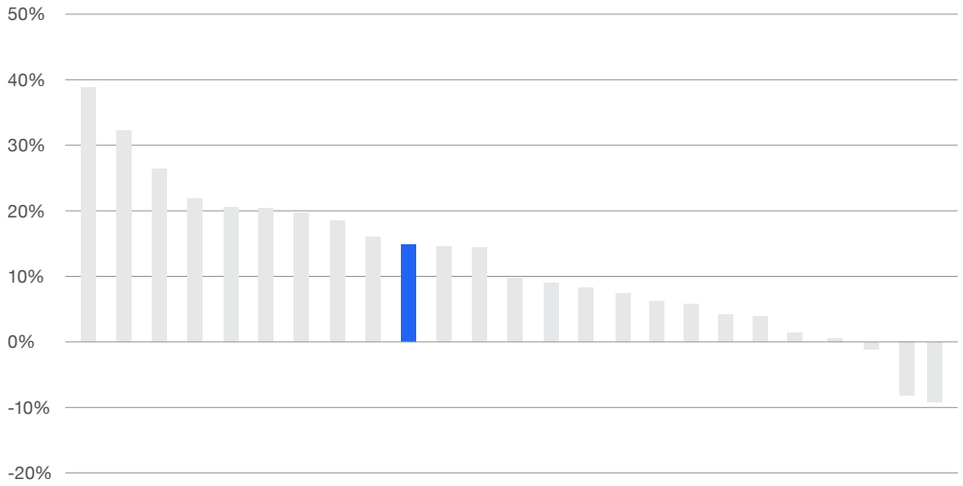
Salary and salary growth

Average annual salary for sales managers is $126,040, salary growth is 30%.



Job postings growth

Among the top 25 opportunity jobs, postings for sales managers rank 10th for job postings growth.



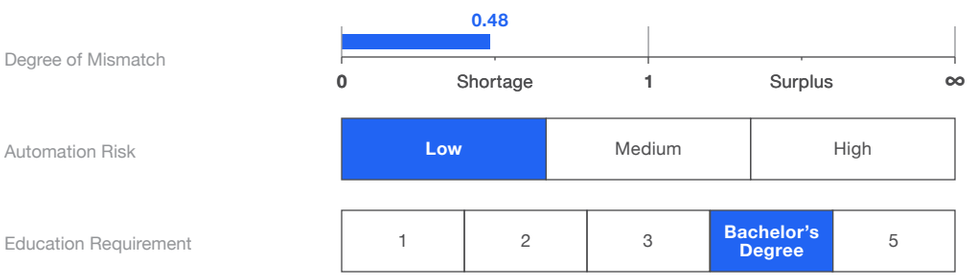
3. Miscellaneous Computer Occupations

Key takeaways

- Computer occupations rank as the 17th opportunity job by postings growth, 3rd for volume of postings
- Among the top 25 opportunity jobs, sales managers rank 17th for salary and 7th for salary growth

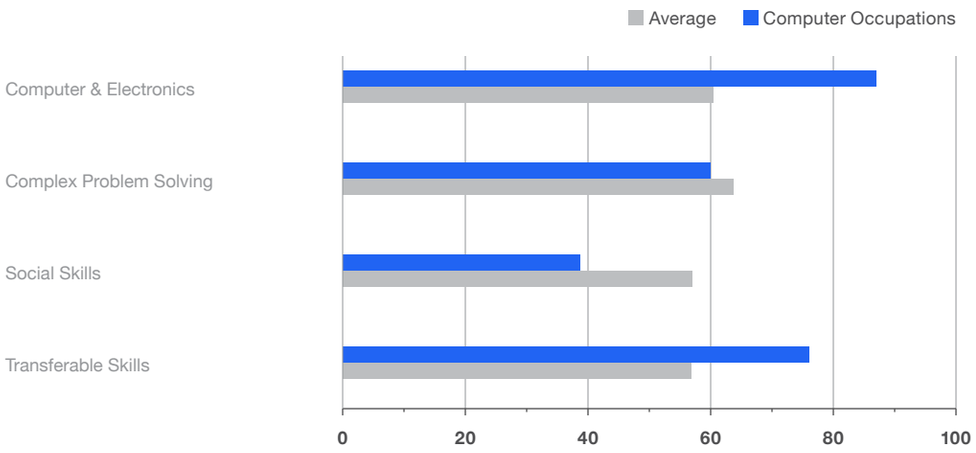
Sample job titles

- Java developer
- Web developer
- Quality engineer



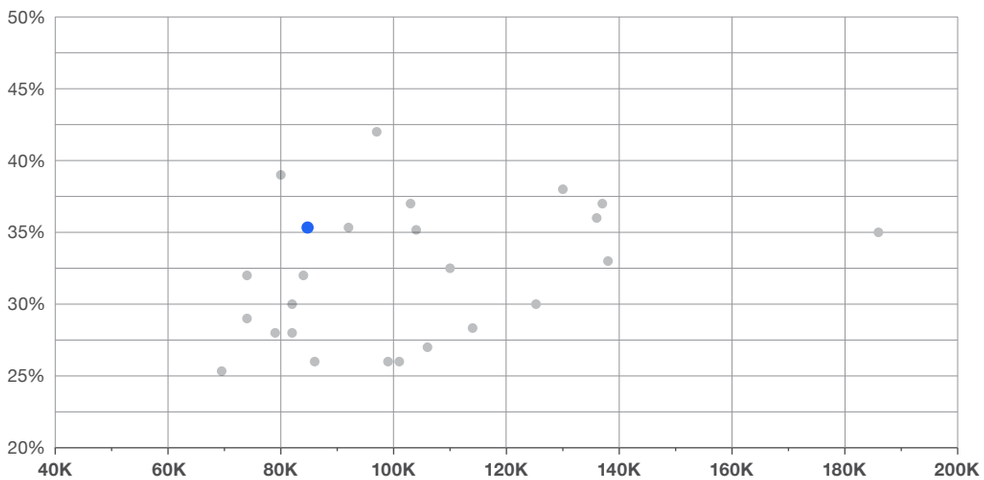
Skills

Computer occupations have a relatively high transferable skills score and can apply their skills to many kinds of work. Necessarily, these jobs have very high computer and electronics skills requirements. They have average complex problem solving and below average social skills requirements, compared to other opportunity jobs.



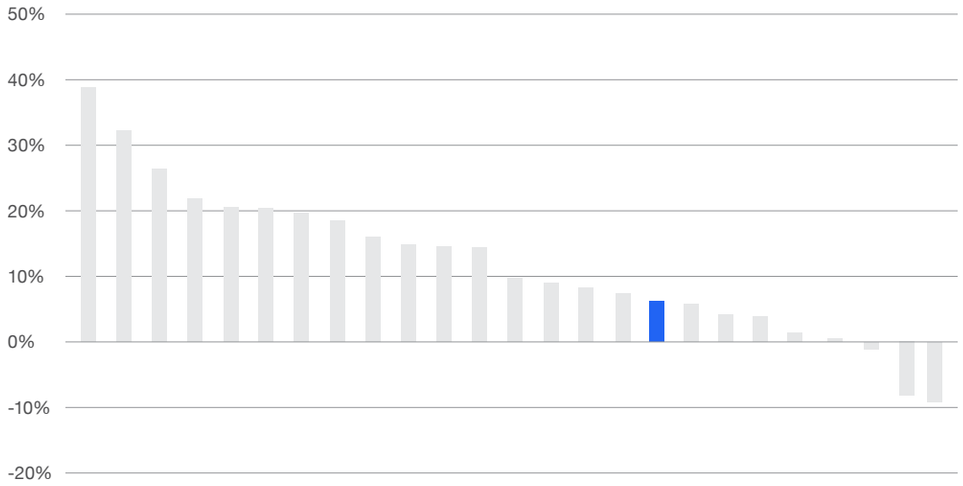
Salary and salary growth

Average annual salary for computer occupations is $85,520, salary growth is 35.9%.



Job postings growth

Among the top 25 opportunity jobs, postings for computer occupations rank 17th for job postings growth.



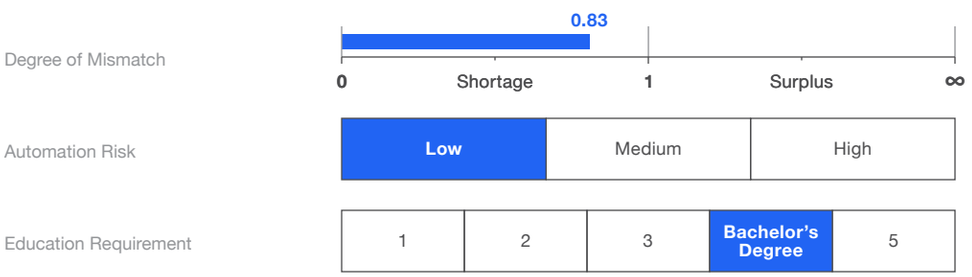
4. Miscellaneous Managers

Key takeaways

- Misc. managers rank as the 11th opportunity job by postings growth and 4th for volume of postings
- Among the top 25 opportunity jobs, misc. managers rank 8th for salary and is tied with architechtural and engineering managers as 11th for salary growth

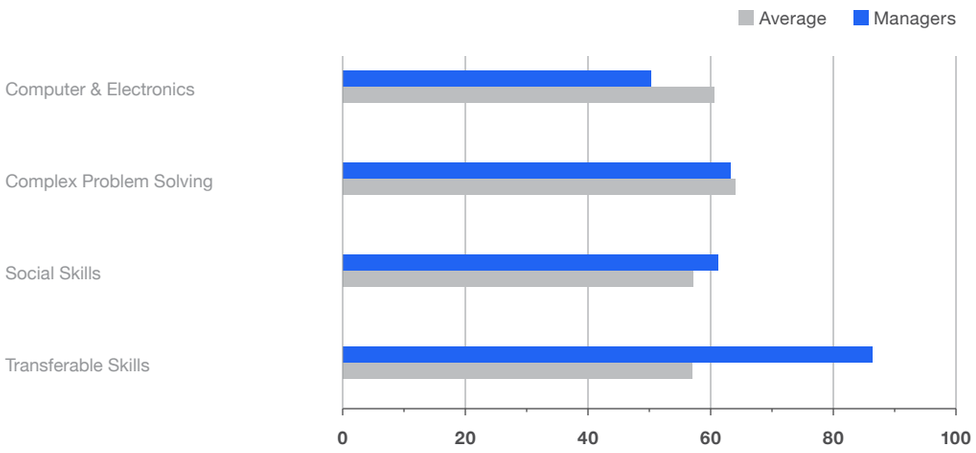
Sample job titles

- Shift manager
- Project manager
- Manager



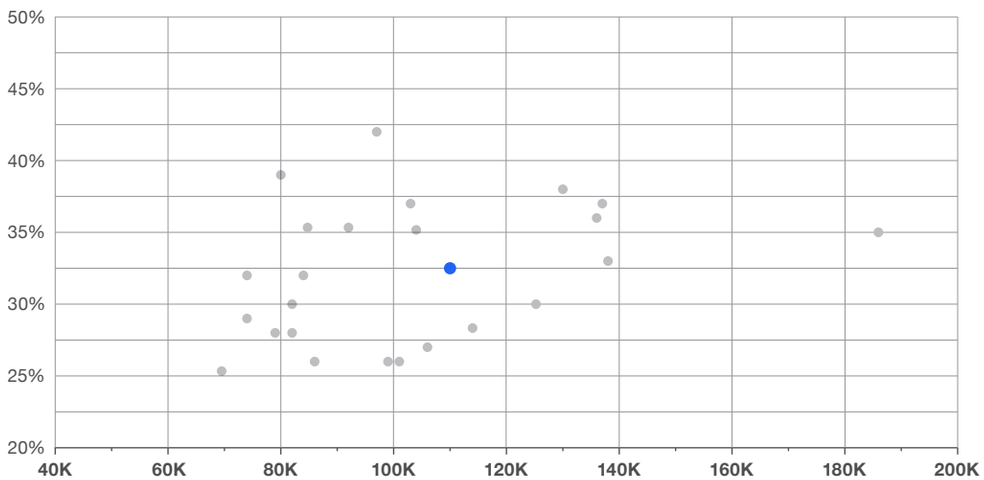
Skills

Misc. manager occupations have a high transferable skills score and can apply their skills to many kinds of work. These jobs have below average computer and electronics skills scores, and slightly above below complex solving and social skills scores.



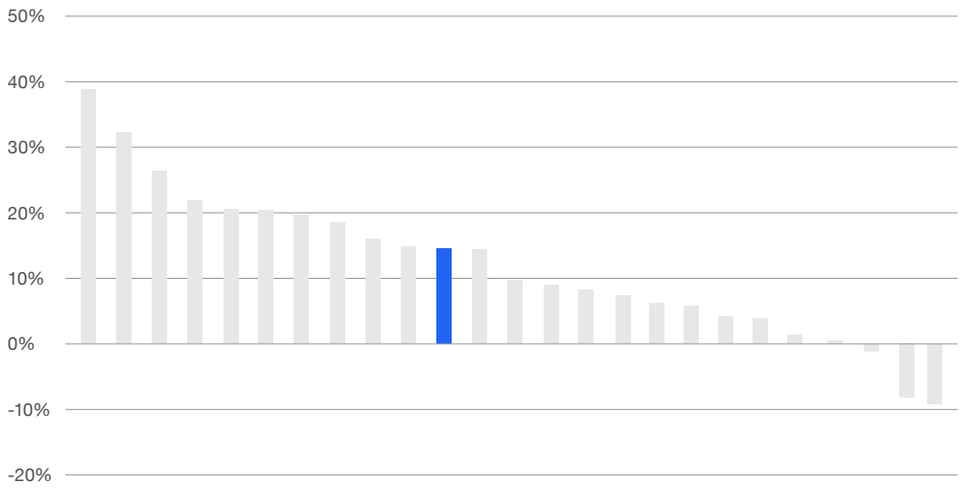
Salary and salary growth

Average annual salary for misc. managers is $110,210, salary growth is 33.1%.



Job postings growth

Among the top 25 opportunity jobs, miscellaneous managers rank 11th for postings growth rate.



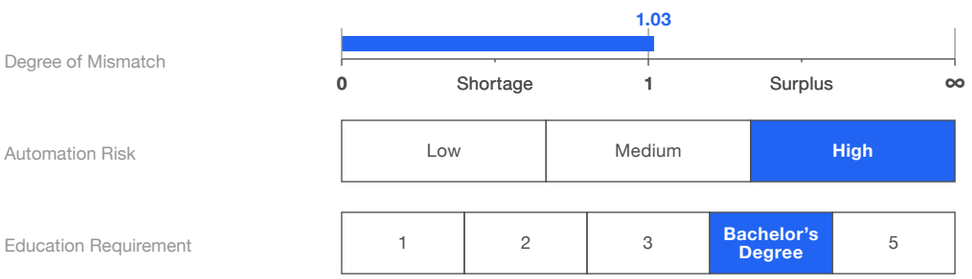
5. Accountants and Auditors

Key takeaways

- Accountants and auditors rank as the 9th opportunity job by postings growth, 5th for volume of postings
- Among the top 25 opportunity jobs, they rank 24th for salary and 17th for salary growth

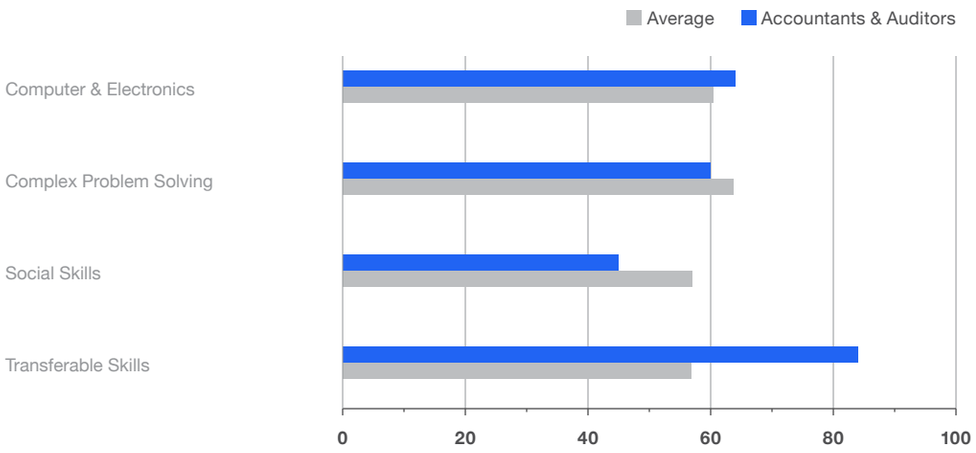
Sample job titles

- Staff accountant
- Senior accountant
- Cost accountant



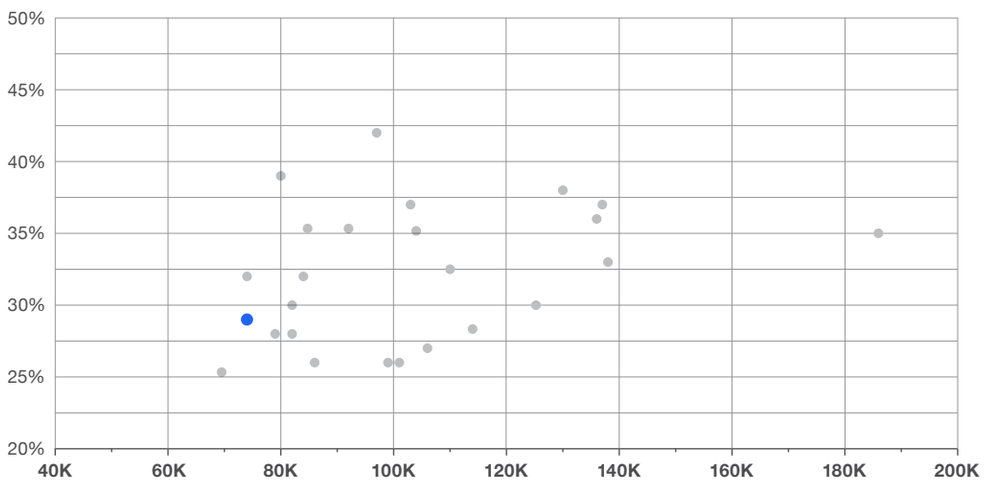
Skills

Accountants and auditors have a high transferable skills score and can apply their skills to many kinds of work. These jobs have slightly above average computer and electronics skills scores, and slightly below average complex solving and social skills scores.



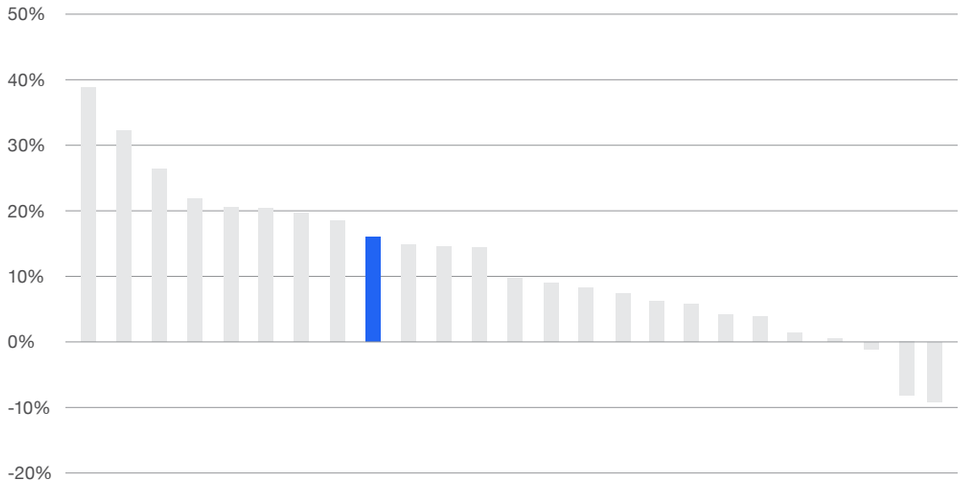
Salary and salary growth

Average annual salary for misc. managers is $73,670, salary growth is 28.9%.



Job postings growth

Among the top 25 opportunity jobs, accountants and auditors rank 9th for postings growth rate.



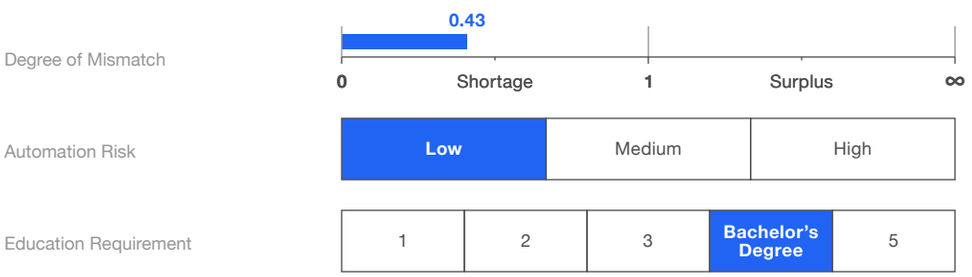
6. Software Developers, Applications

Key takeaways

- Software developers, applications rank as the 18th opportunity job by postings growth, 6th for volume of postings
- Among the top 25 opportunity jobs, they rank 13th for salary and 22nd for salary growth

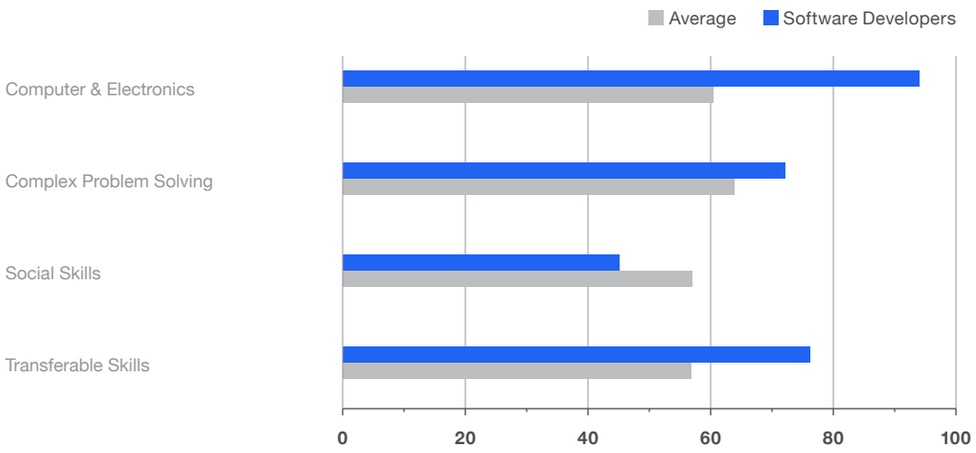
Sample job titles

- Software engineer
- .NET developer
- Application developer



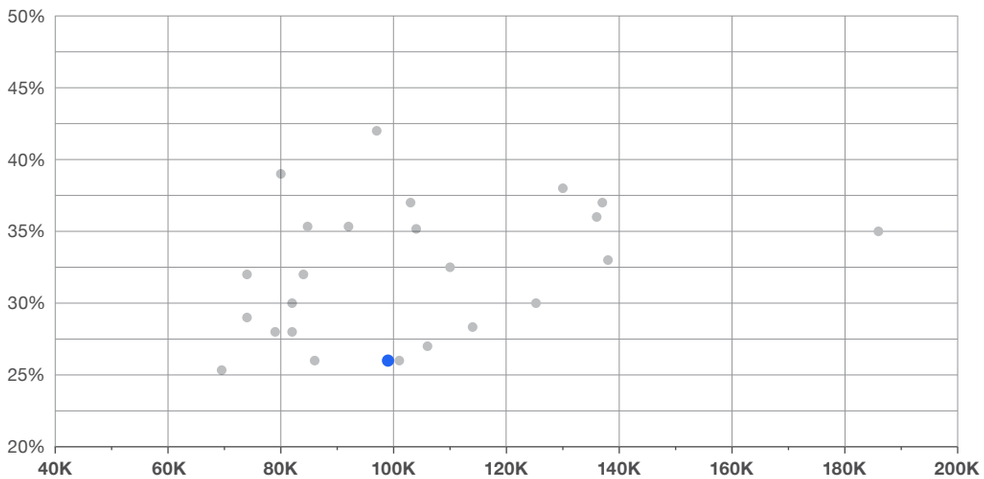
Skills

Software developers, applications have a relatively high transferable skills score and can apply their skills to many kinds of work. Necessarily, these jobs have very high computer and electronics skills requirements. They have above average complex problem solving and below average social skills requirements, compared to other opportunity jobs.



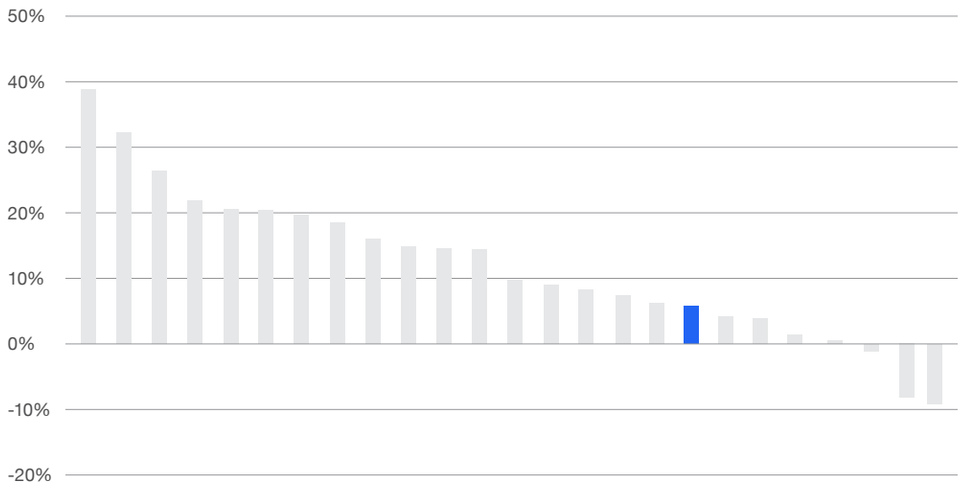
Salary and salary growth

Average annual salary for software developers, applications is $99,530, and salary growth of 26.7%.



Job postings growth

Among the top 25 opportunity jobs, postings for software developers, applications rank 18th for job postings growth.



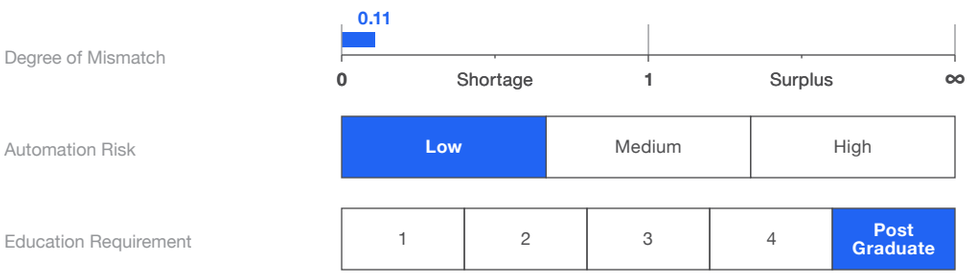
7. Physical Therapists

Key takeaways

- Physical therapists rank as the 13th opportunity job by postings growth and 7th for volume of postings
- Among the top 25 opportunity jobs, physical therapists rank 18th for salary and are tied with speech-language pathologists as 13th for salary growth

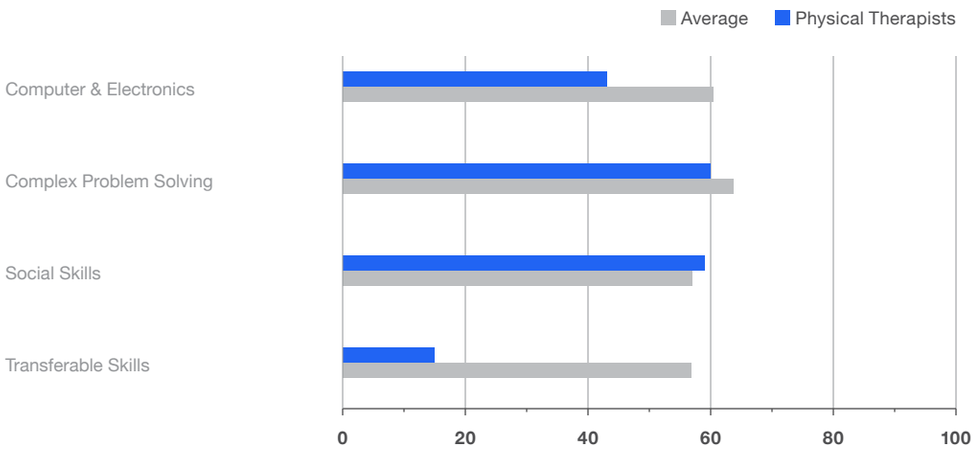
Sample job titles

- Physical therapist
- Travel physical therapist



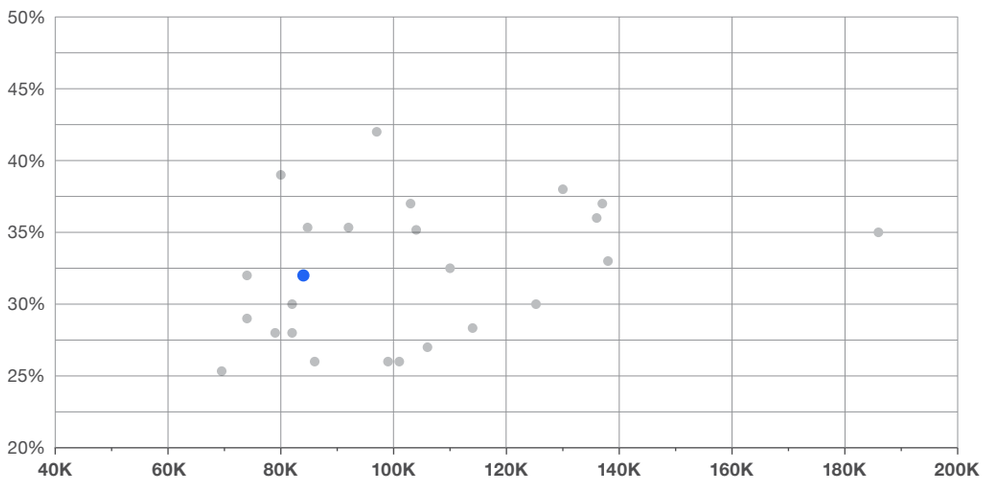
Skills

Physical therapists have a very low transferable skills score as their work is very specialized. These jobs have low computer and electronics skills requirements. They have slightly below complex problem solving and above average social skills requirements, compared to other opportunity jobs.



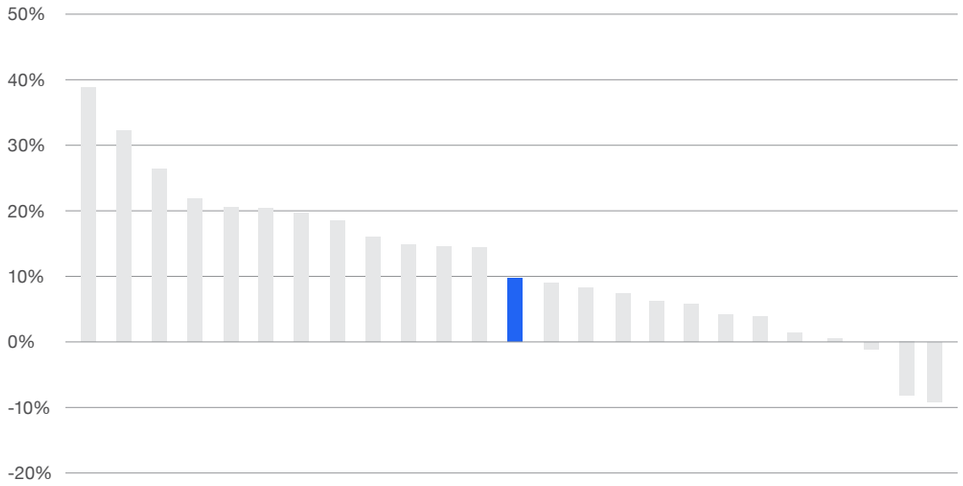
Salary and salary growth

Average annual salary for physical therapists is $83,940, salary growth is 31.8%.



Job postings growth

Among the top 25 opportunity jobs, postings for physical therapists, applications rank 13th for job postings growth.



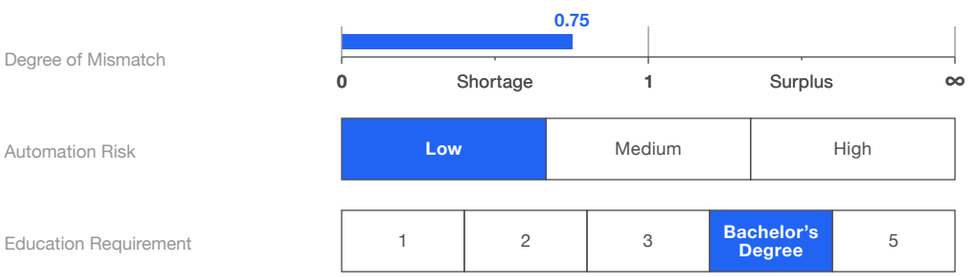
8. Network, Computer Systems Admins

Key takeaways

- Network and computer systems administrators rank as the 8th opportunity job by postings growth and 8th by volume of postings
- Among the top 25 opportunity jobs, they rank 22nd for salary and 19th for salary growth

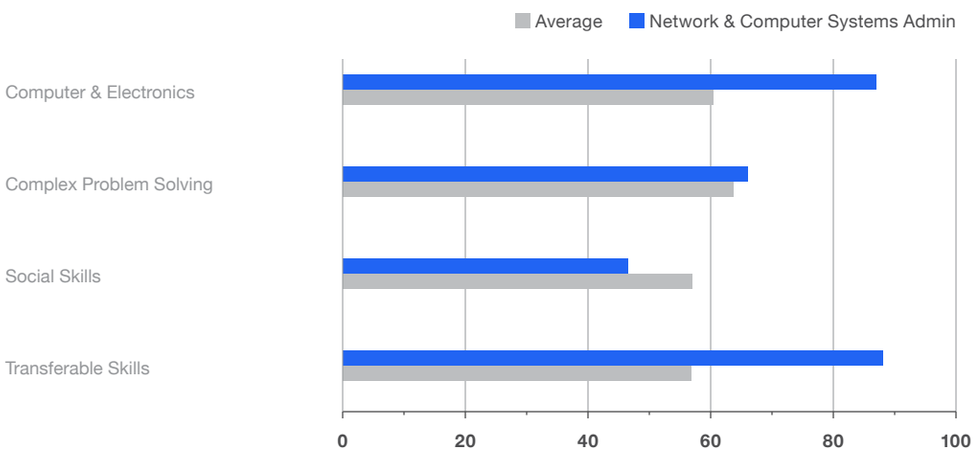
Sample job titles

- Network engineer
- Systems administrator
- Network administrator



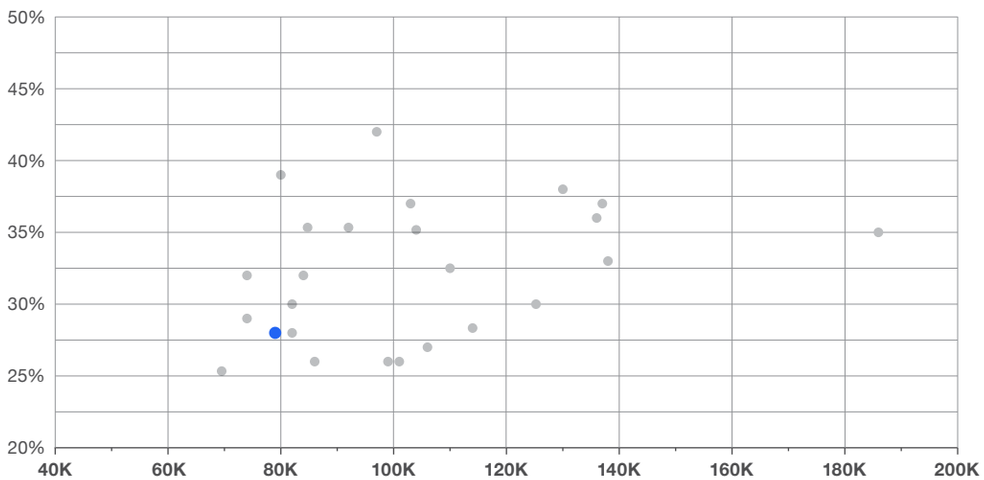
Skills

Network and computer systems administrators have a very high transferable skills score, their work has many applications. They have above average computer and electronics and complex problem solving skills. Social skills requirements are below average.



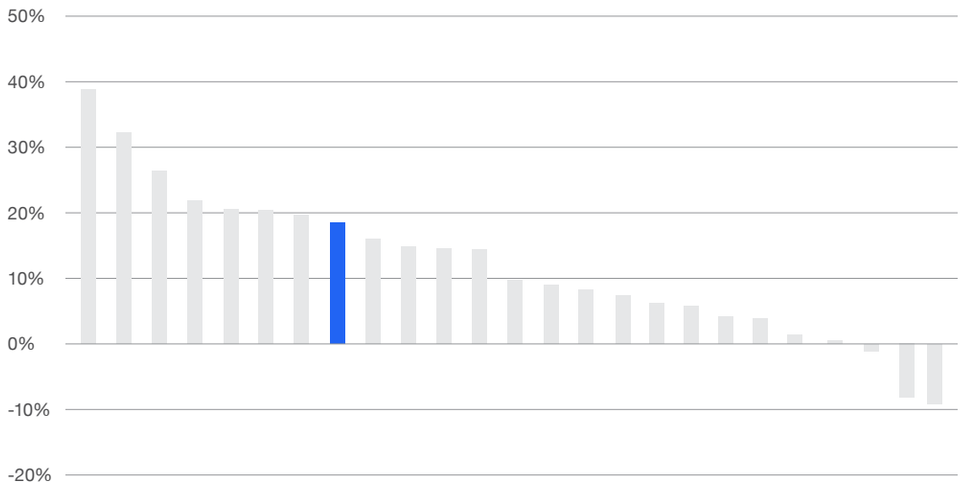
Salary and salary growth

Average annual salary for network computer and systems administrators is $79,770, salary growth is 28%.



Job postings growth

Among the top 25 opportunity jobs, postings for network and computer systems administrators rank 8th for job postings growth.



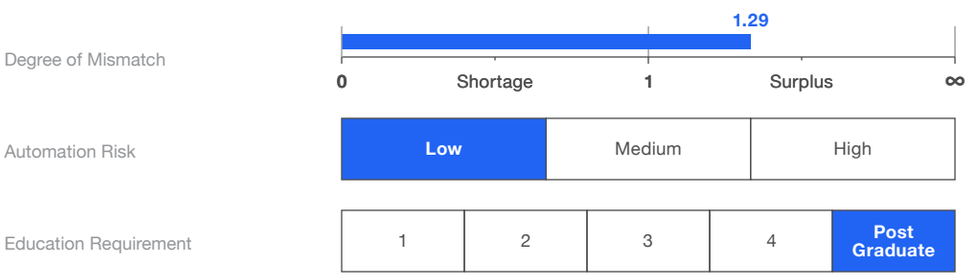
9. Medical and Health Services Managers

Key takeaways

- Medical and health services managers rank as the 5th opportunity job by postings growth, 9th for volume of postings
- Among the top 25 opportunity jobs, they rank 11th for salary and 5th for salary growth

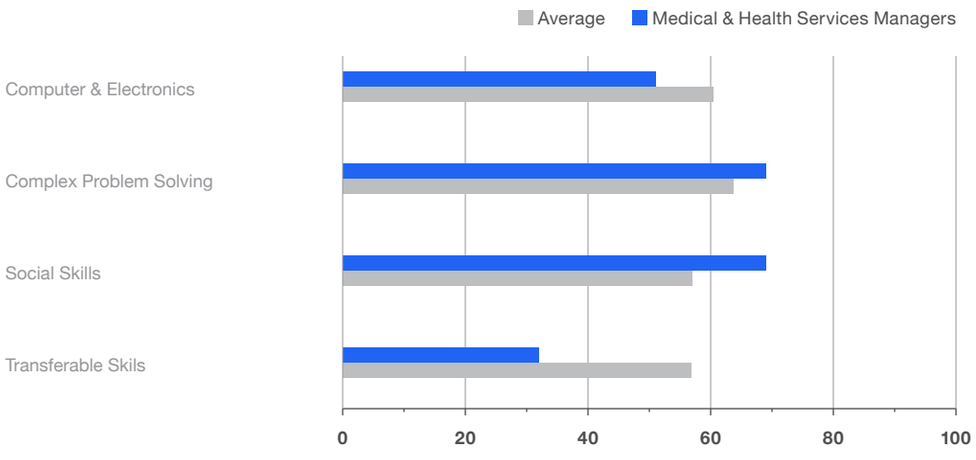
Sample job titles

- Medical director
- Service coordinator
- Nursing home administrator



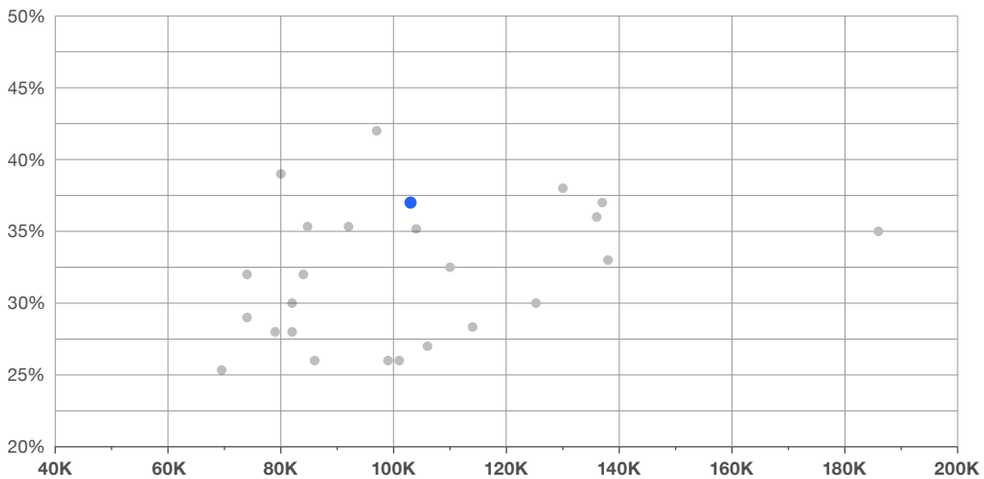
Skills

Medical and health services managers have a low transferable skills score as their work tends to be very specialized. These jobs have below average computer and electronics skills requirements. They have above average complex problem solving and social skills requirements, compared to other opportunity jobs.



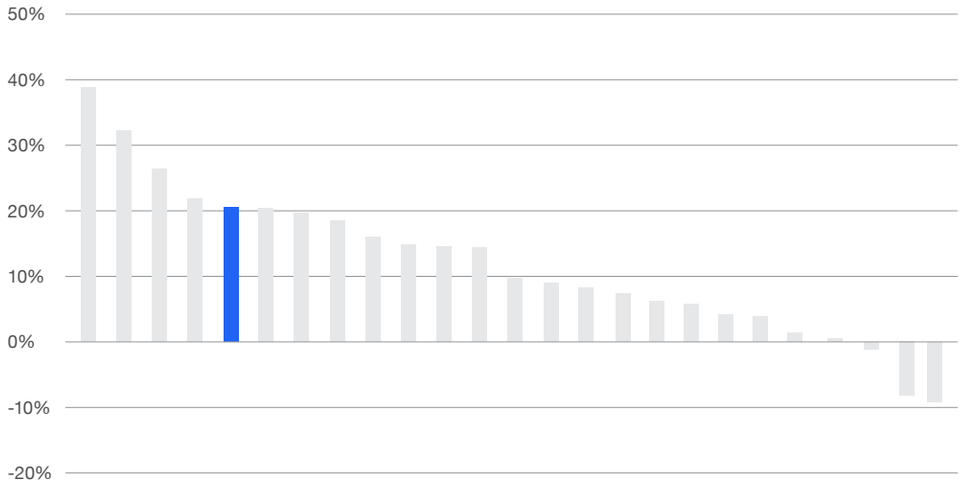
Salary and salary growth

Average annual salary for medical and health services managers is $103,680, salary growth is 36.7%.



Job postings growth

Among the top 25 opportunity jobs, postings for medical and health services managers rank 5th for job postings growth.



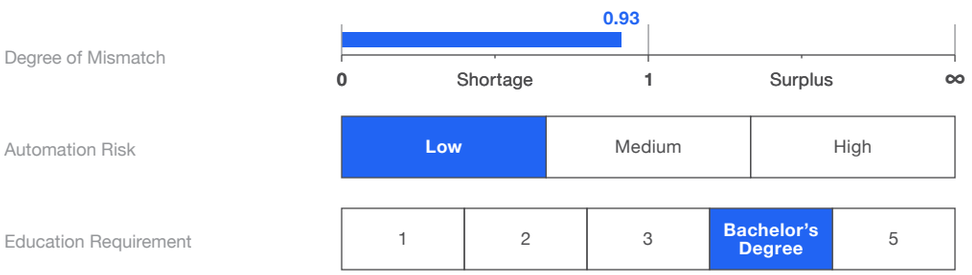
10. Computer, Information Systems Managers

Key takeaways

- Computer and information systems managers rank as the 20th opportunity job by postings growth and 10th for volume of postings
- Among the top 25 opportunity jobs, they rank 4th for salary and 6th for salary growth

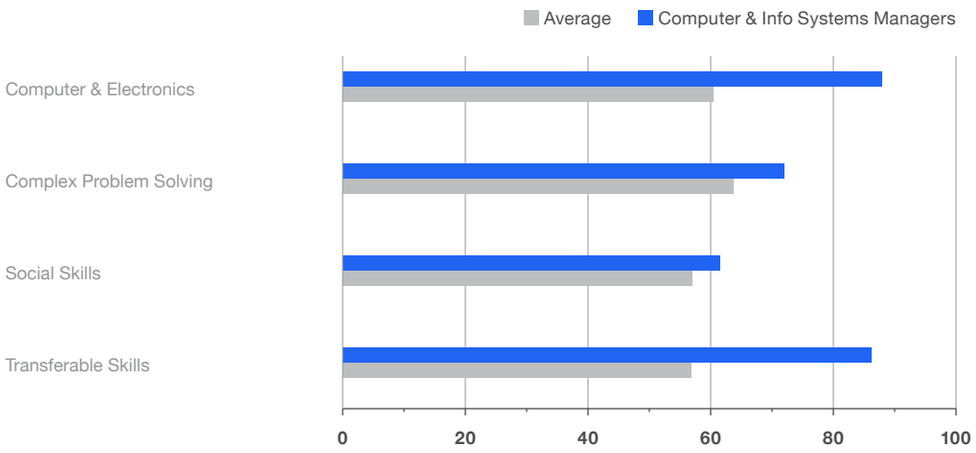
Sample job titles

- Program manager
- IT project manager
- Information technology specialist



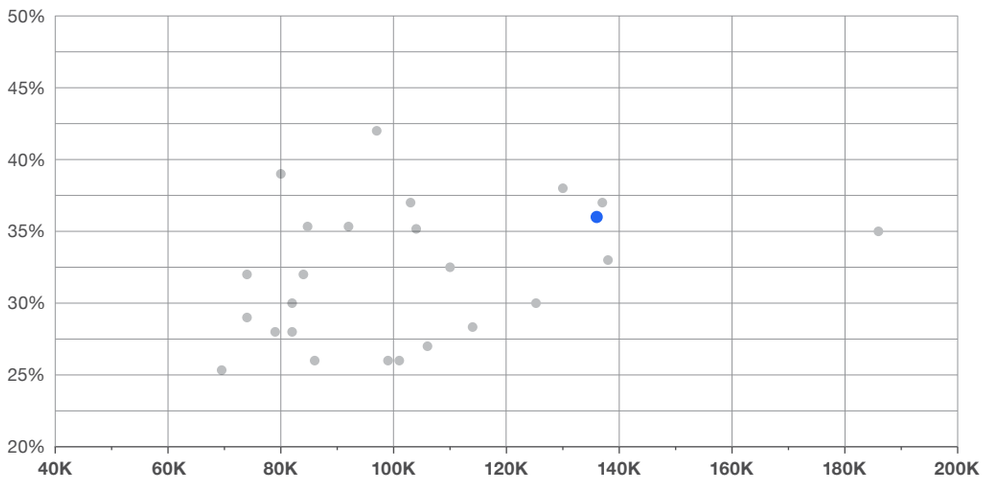
Skills

Computer and information systems managers have a high transferable skills score. These jobs have very high computer and electronics skills requirements. They have above average complex problem solving and above average social skills requirements, compared to other opportunity jobs.



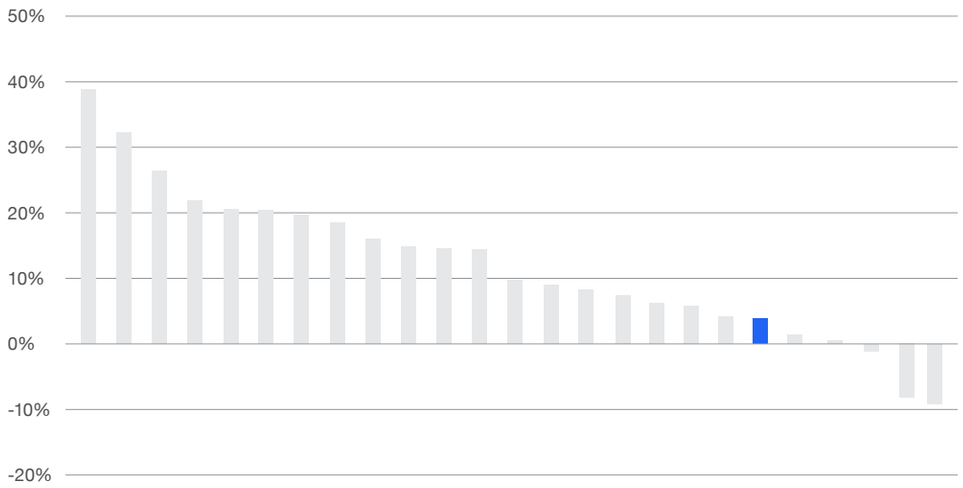
Salary and salary growth

Average annual salary for computer and information systems managers is $136,280, salary growth is 36.1%.



Job postings growth

Among the top 25 opportunity jobs, postings for computer and information systems managers rank 20th for job postings growth.



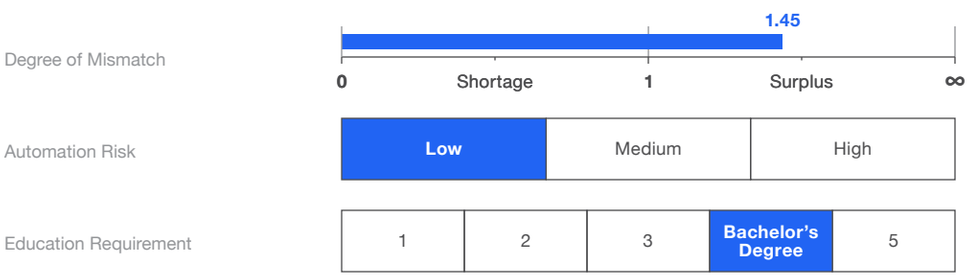
11. Marketing Managers

Key takeaways

- Marketing managers rank as the 7th opportunity job by postings growth, 11th by volume of postings
- Among the top 25 opportunity jobs, marketing managers rank 3rd for salary and 4th for salary growth

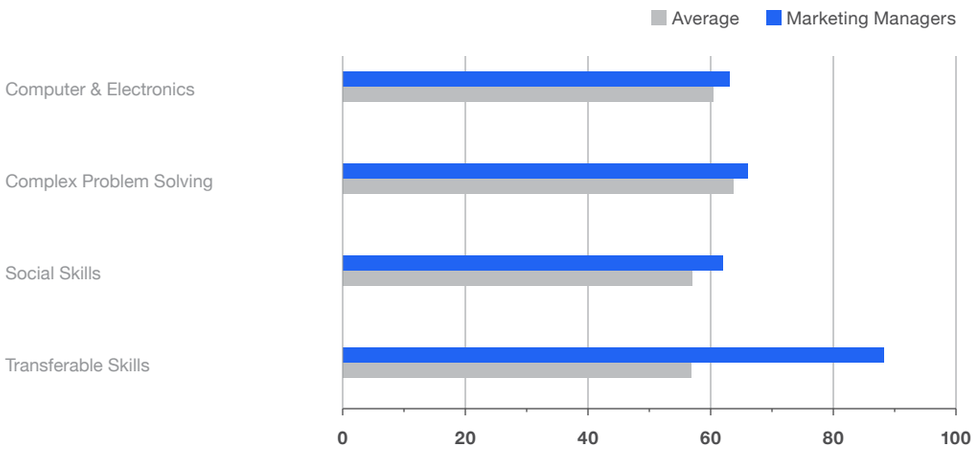
Sample job titles

- Business development manager
- Marketing coordinator
- Product marketing manager



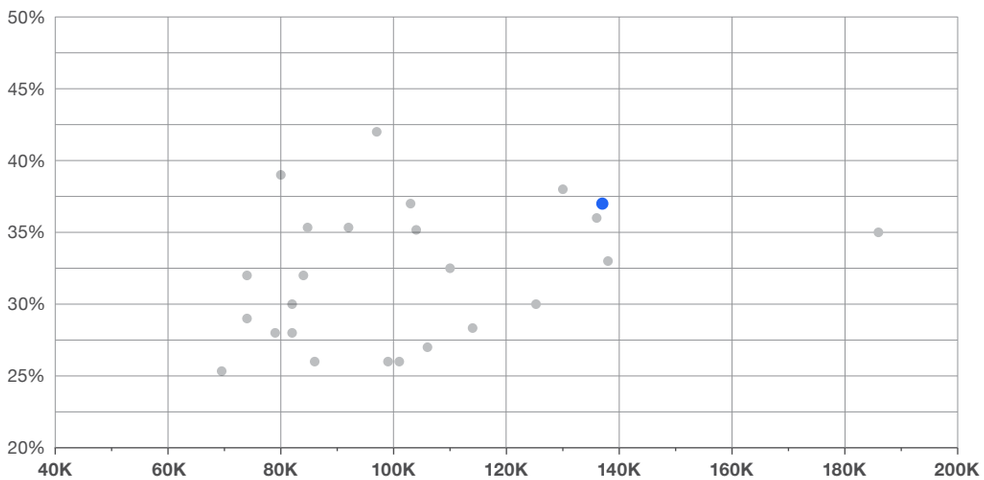
Skills

Marketing managers have a high transferable skills score. These jobs have above average computer and electronics, complex problem solving, and social skills requirements, compared to other opportunity jobs.



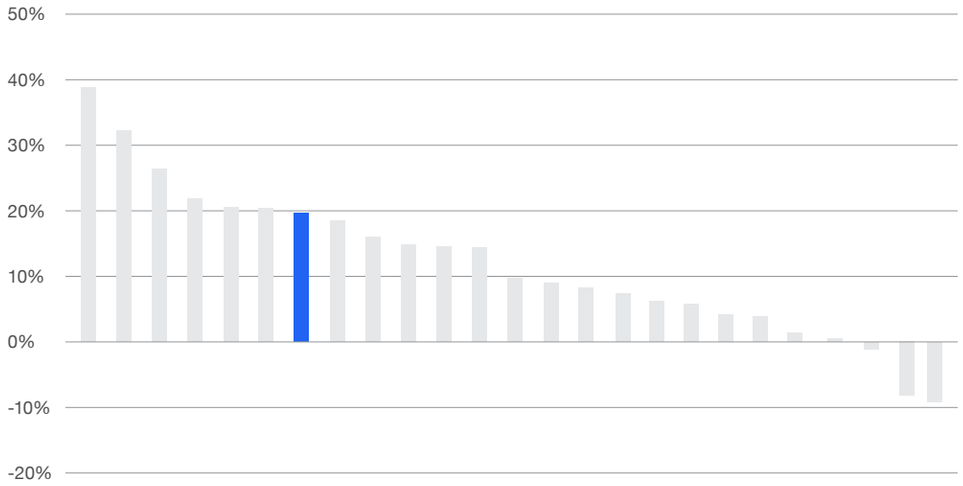
Salary and salary growth

Average annual salary for marketing managers is $137,400, salary growth is 37.4%.



Job postings growth

Among the top 25 opportunity jobs, postings for marketing managers rank 7th for job postings growth.



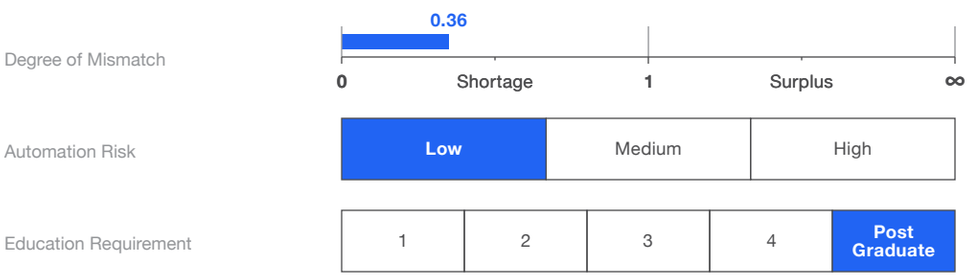
12. Physician Assistants

Key takeaways

- Physicians assistants rank as the 25th opportunity job by postings growth, 12th by volume of postings
- Among the top 25 opportunity jobs, physicians assistants rank 14th for salary and 1st for salary growth

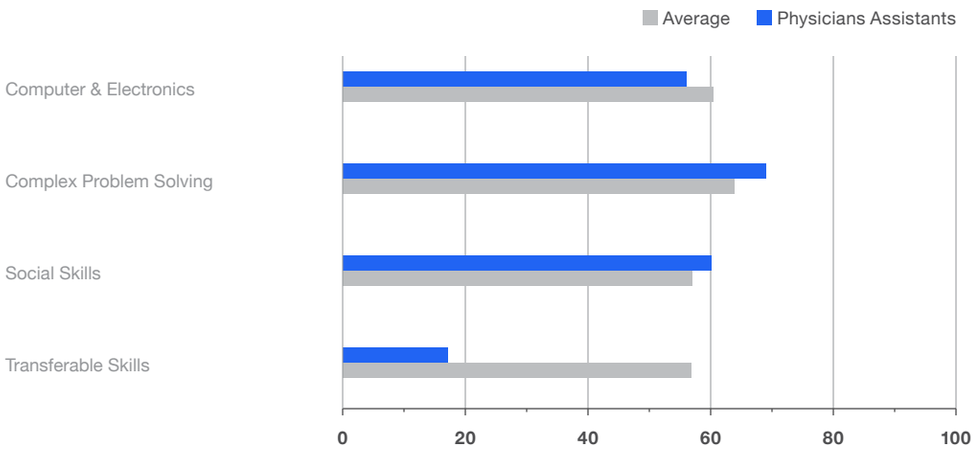
Sample job titles

- Physician assistant
- Staff physician
- EM physician



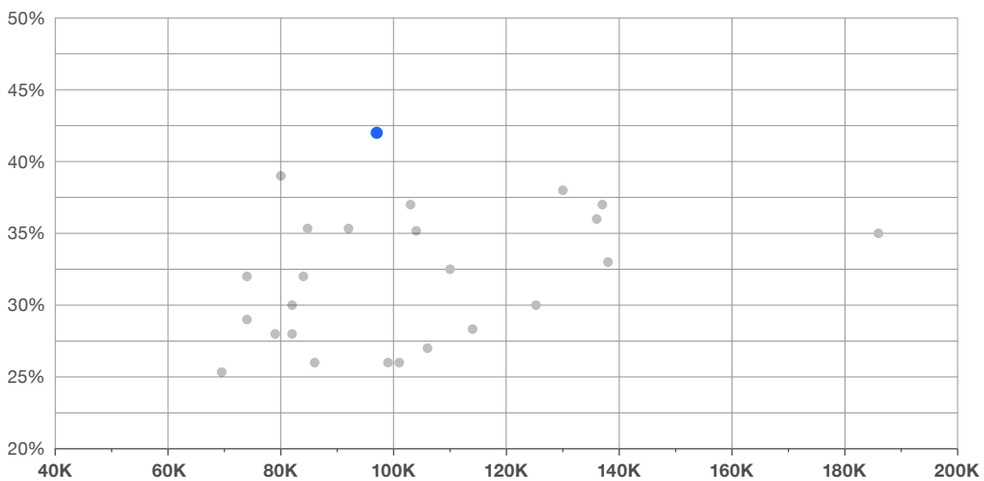
Skills

Physicians assistants have a very low transferable skills score as these roles are highly specialized. These jobs have below average computer and electronics, above average complex problem solving and social skills.



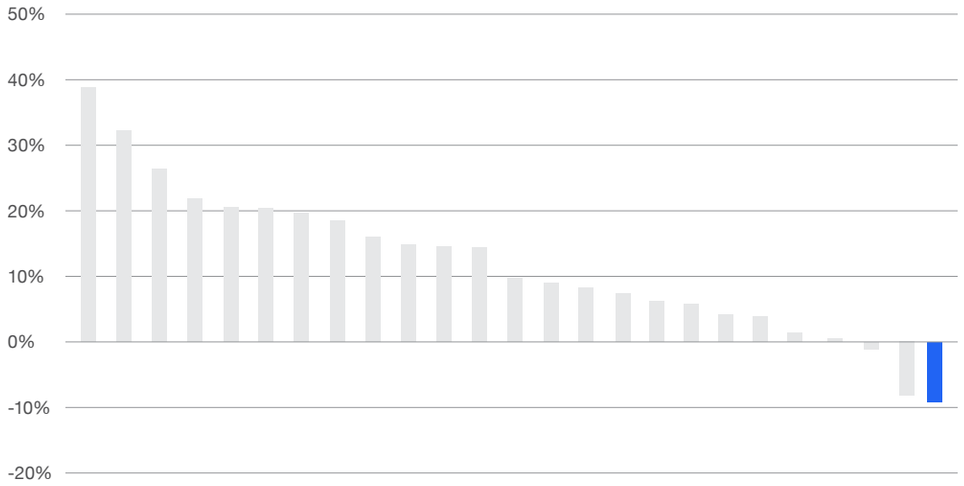
Salary and salary growth

Average annual salary for physicians assistants is $97,280, salary growth is 42%.



Job postings growth

Among the top 25 opportunity jobs, postings for physicians assistants rank 25th for job postings growth.



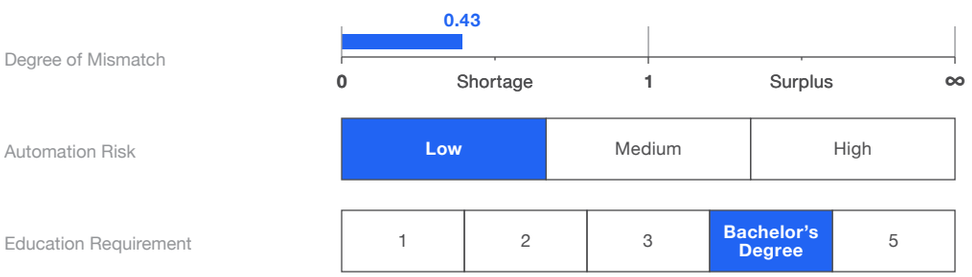
13. Systems Software Developers

Key takeaways

- Systems software developers rank as the 22nd opportunity job by postings growth, 13th by volume of postings
- Among the top 25 opportunity jobs, they rank 9th for salary and 21st for salary growth

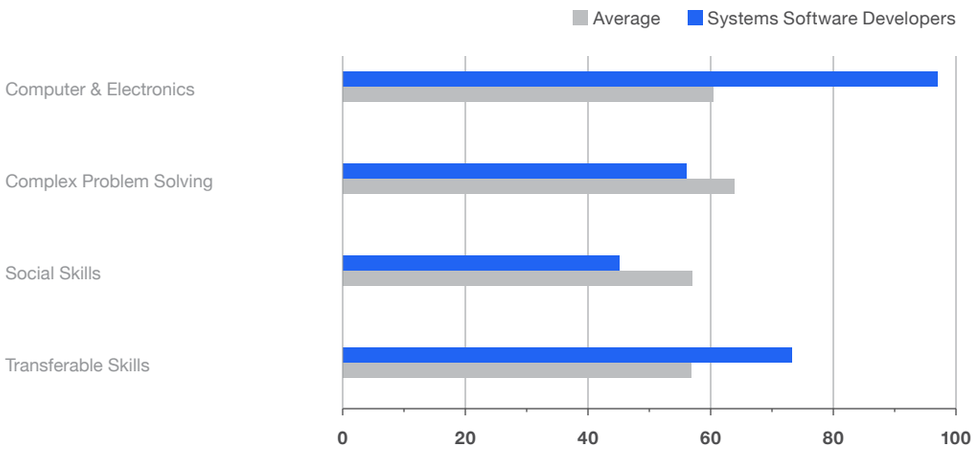
Sample job titles

- Software engineer
- Systems engineer
- Software development engineer



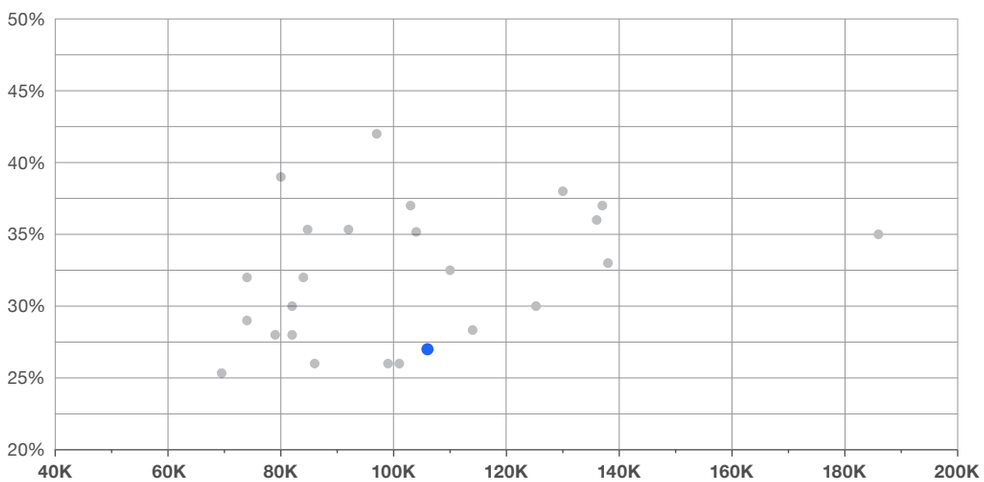
Skills

Systems software developers have an above average transferable skills score. These jobs have very high computer and electronics, and below average complex problem solving and social skills requirements, compared to other opportunity jobs.



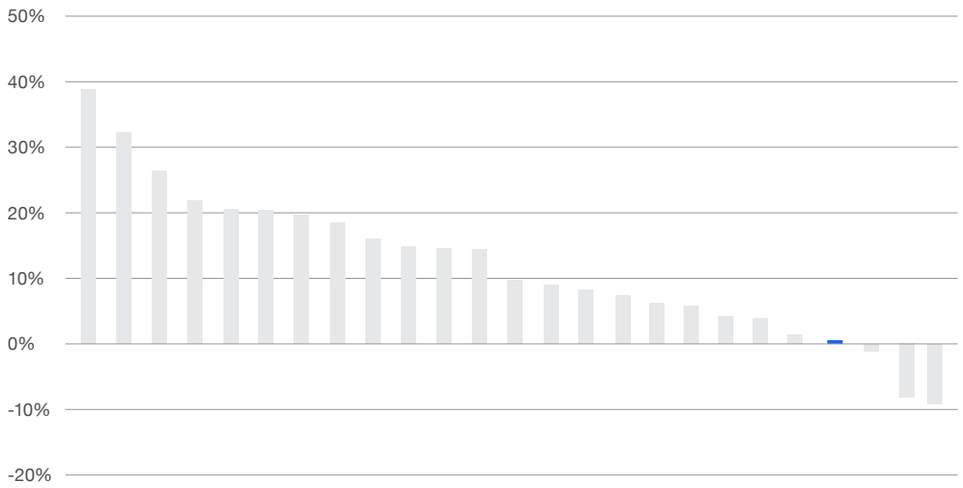
Salary and salary growth

Average annual salary for systems software developers is $106,050, salary growth is 27.1%.



Job postings growth

Among the top 25 opportunity jobs, postings for systems software developers rank 22nd for job postings growth.



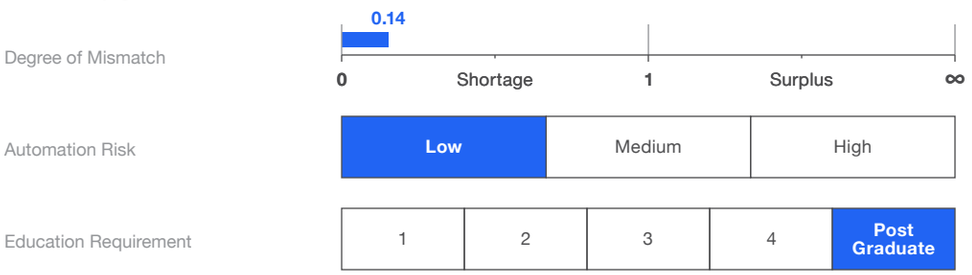
14. Speech-Language Pathologists

Key takeaways

- Speech-language pathologists rank as the 2nd opportunity job by postings growth, 14th for volume of postings
- Among the top 25 opportunity jobs, they rank 23rd for salary and is tied with physical therapists as 13th for salary growth

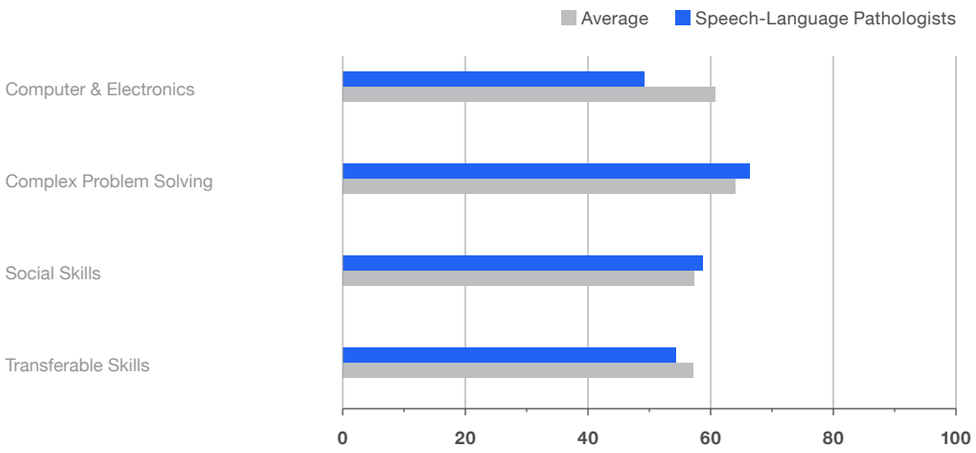
Sample job titles

- Speech language pathologist
- Speech therapist
- Travel speech language pathologist



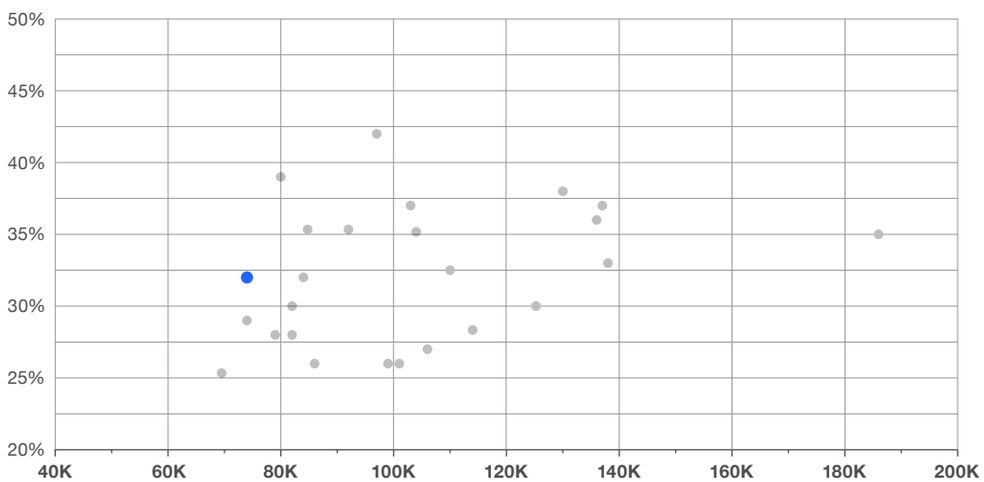
Skills

Speech-language pathologists have a below average transferable skills score. These jobs have a below average computer and electronics skills requirements, and above average complex problem solving and social skills requirements, compared to other opportunity jobs.



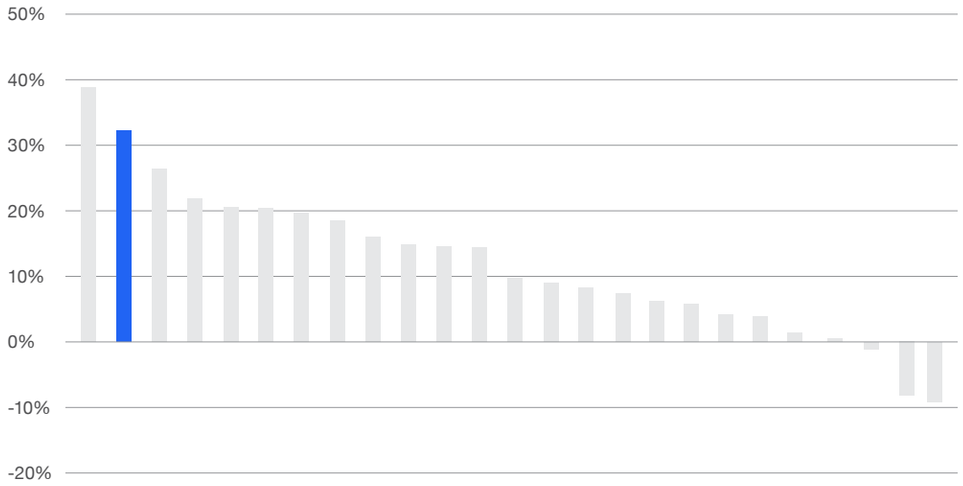
Salary and salary growth

Average annual salary for speech-language pathologists is $74,900, salary growth is 31.8%.



Job postings growth

Among the top 25 opportunity jobs, postings for speech-language pathologists rank 2nd for job postings growth.



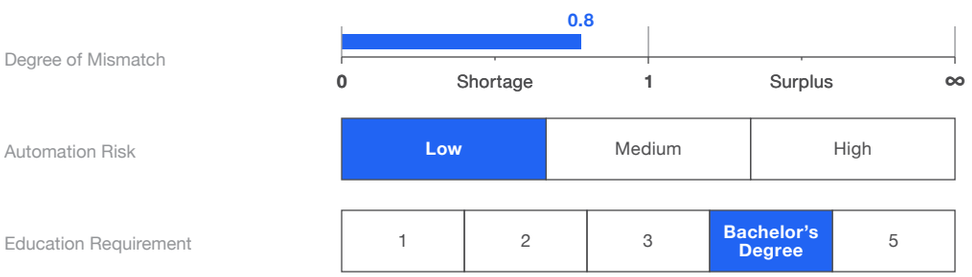
15. Computer Systems Analysts

Key takeaways

- Computer systems analysts rank as the 19th opportunity job by postings growth, 15th for volume of postings
- Among the top 25 opportunity jobs, they rank 16th for salary and 24th for salary growth

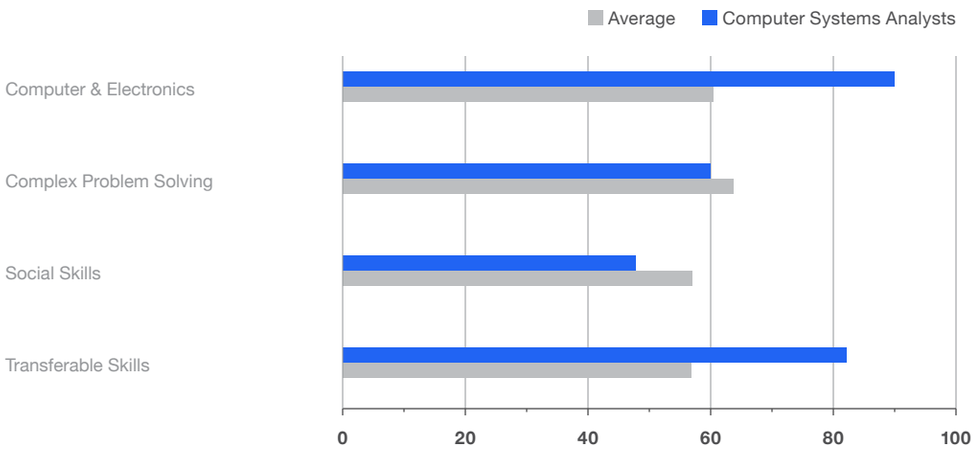
Sample job titles

- Systems analyst
- Programmer analyst
- IT business analyst



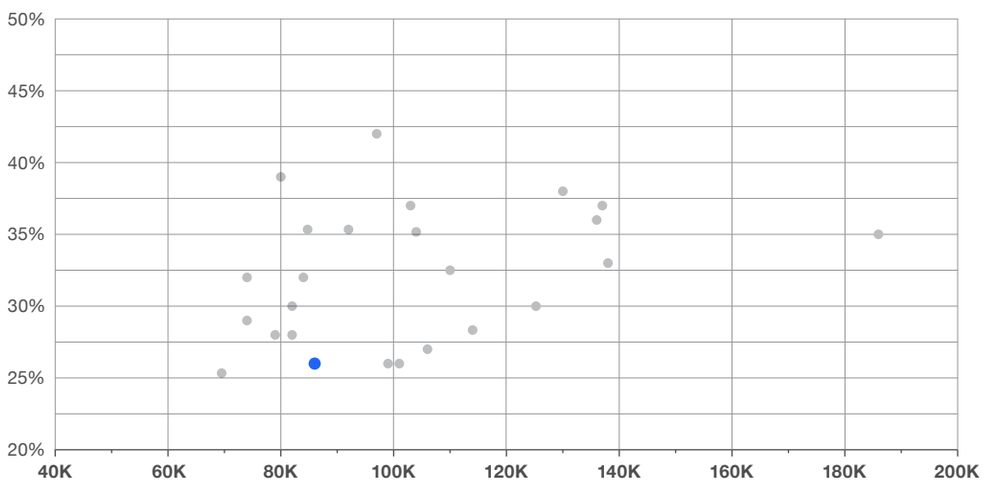
Skills

Computer systems analysts have a high transferable skills score. These jobs have a very high computer and electronics skills requirements, and below average complex problem solving and social skills requirements, compared to other opportunity jobs.



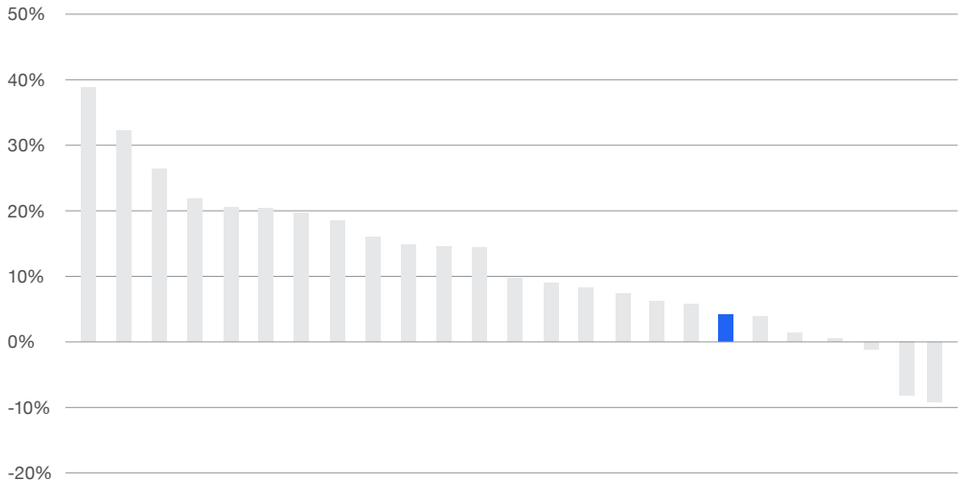
Salary and salary growth

Average annual salary for computer systems analysts is $87,320, salary growth is 25.7%.



Job postings growth

Among the top 25 opportunity jobs, postings for computer systems analysts rank 19th for job postings growth.



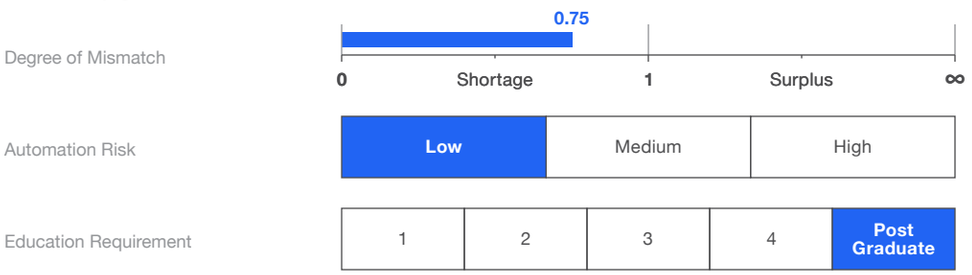
16. Architectural, Engineering Managers

Key takeaways

- Architectural and engineering managers rank as the 15th opportunity job by postings growth, 16th for volume of postings
- Among the top 25 opportunity jobs, they rank 2nd for salary and are tied with misc. managers as 11th for salary growth

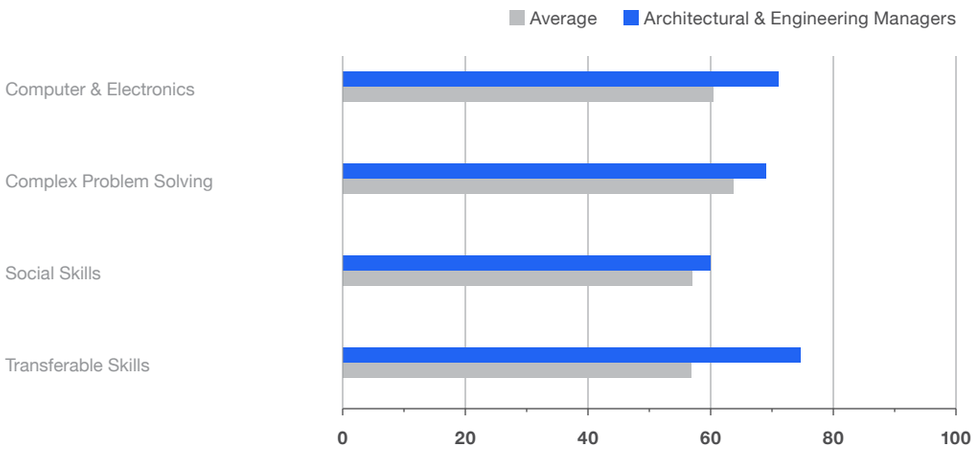
Sample job titles

- Project engineer
- Technical project manager
- Senior dev ops engineer



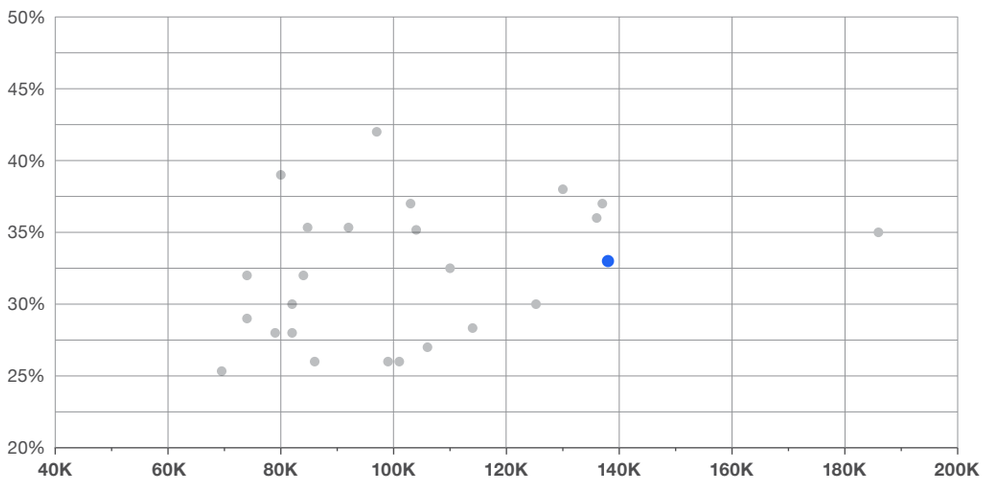
Skills

Architectural and engineering managers have an above average transferable skills score. These jobs have above average computer and electronics skills requirements, complex problem solving and social skills requirements, compared to other opportunity jobs.



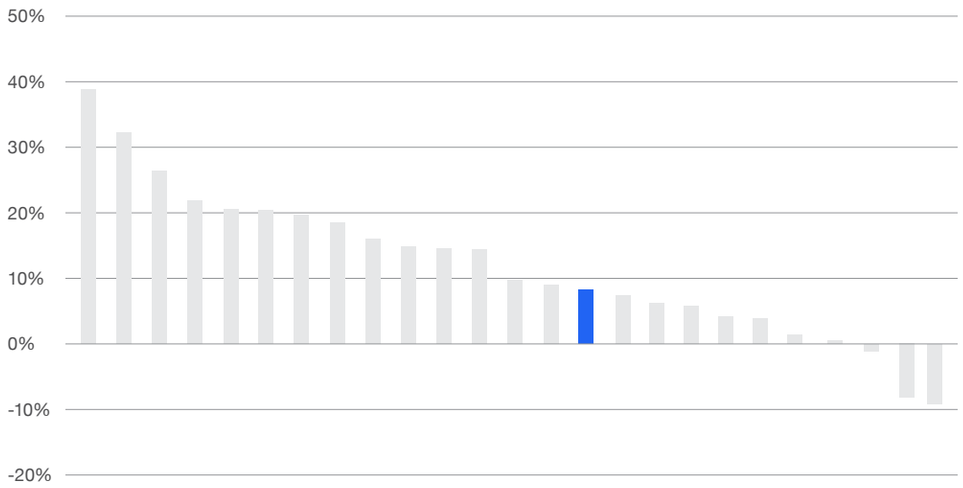
Salary and salary growth

Average annual salary for architectural and engineering managers is $138,720, salary growth is 33.1%.



Job postings growth

Among the top 25 opportunity jobs, postings for architectural and engineering managers rank 15th for job postings growth.



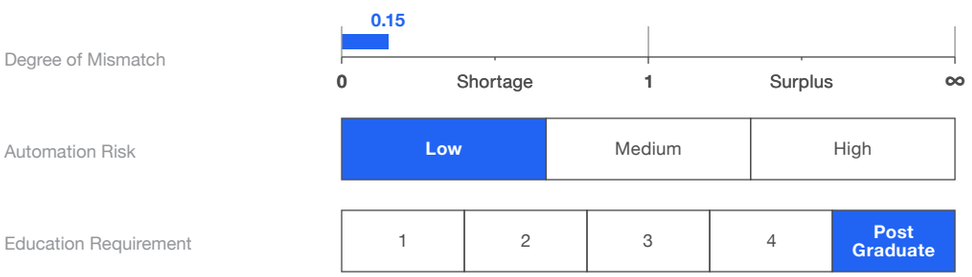
17. Occupational Therapists

Key takeaways

- Occupational therapists rank as the 23rd opportunity job by postings growth, 17th for volume of postings
- Among the top 25 opportunity jobs, occupational therapists rank 21st for salary and 2nd for salary growth

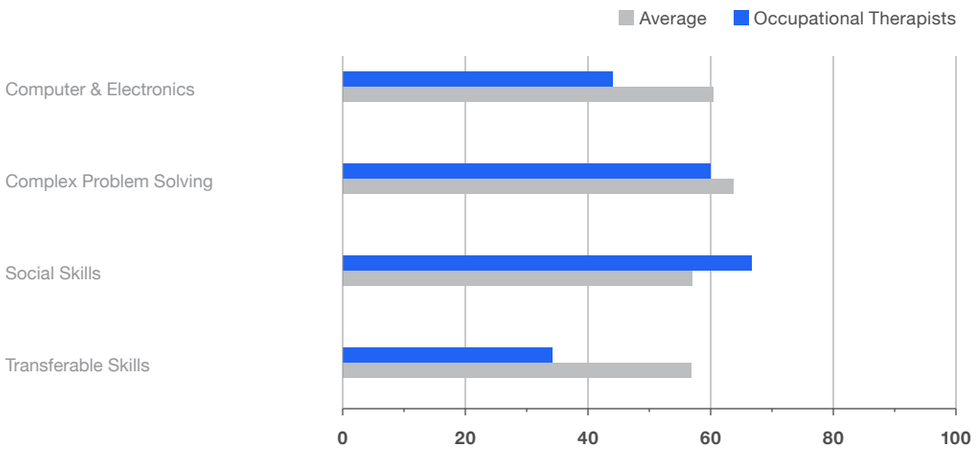
Sample job titles

- Occupational therapist
- Travel occupational therapist
- Pediatric occupational therapist



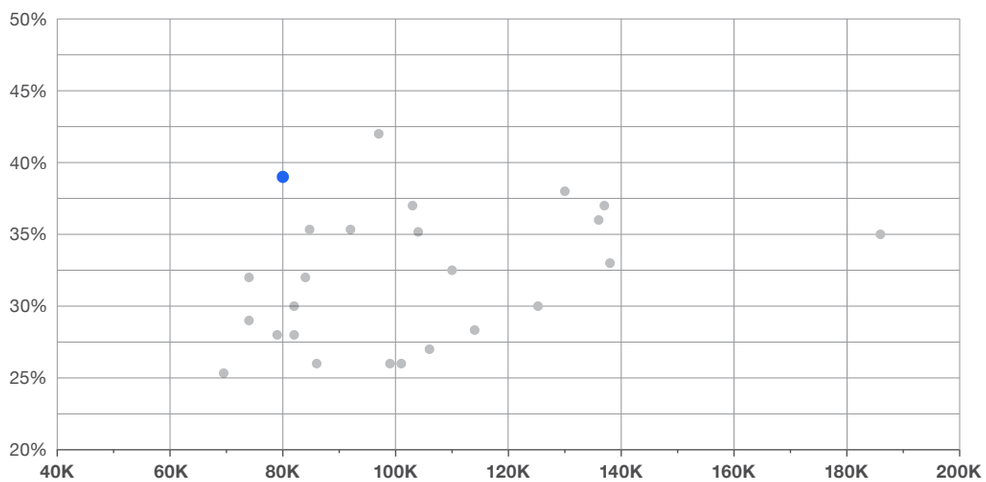
Skills

Occupational therapists have a low transferable skills score. These jobs have below average computer and electronics and complex problem solving skills requirements. They have above average social skills requirements, compared to other opportunity jobs.



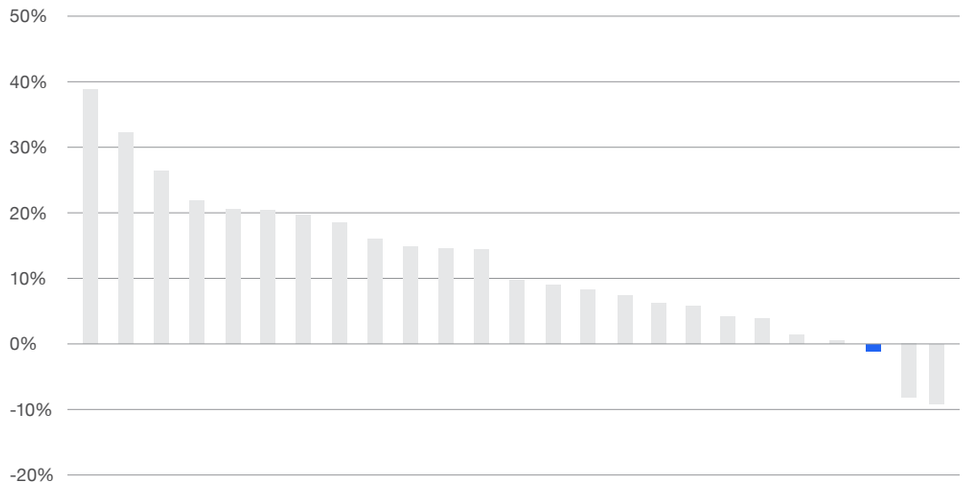
Salary and salary growth

Average annual salary for occupational therapists is $80,000, salary growth is 38.9%.



Job postings growth

Among the top 25 opportunity jobs, postings for occupational therapists rank 23rd for job postings growth.



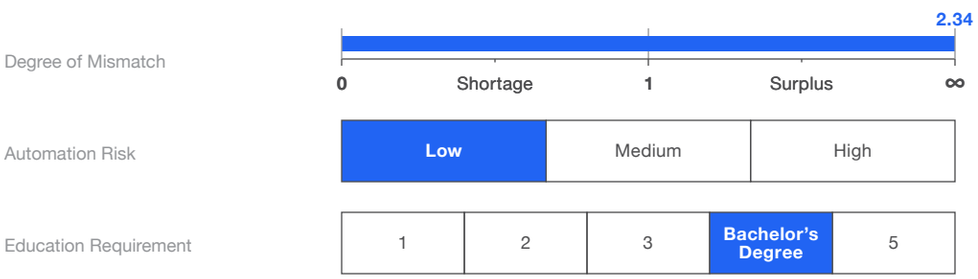
18. Human Resources Managers

Key takeaways

- Human resources managers rank as the 6th opportunity job by postings growth, 18th for volume of postings
- Among the top 25 opportunity jobs, they rank 7th for salary and 18th for salary growth

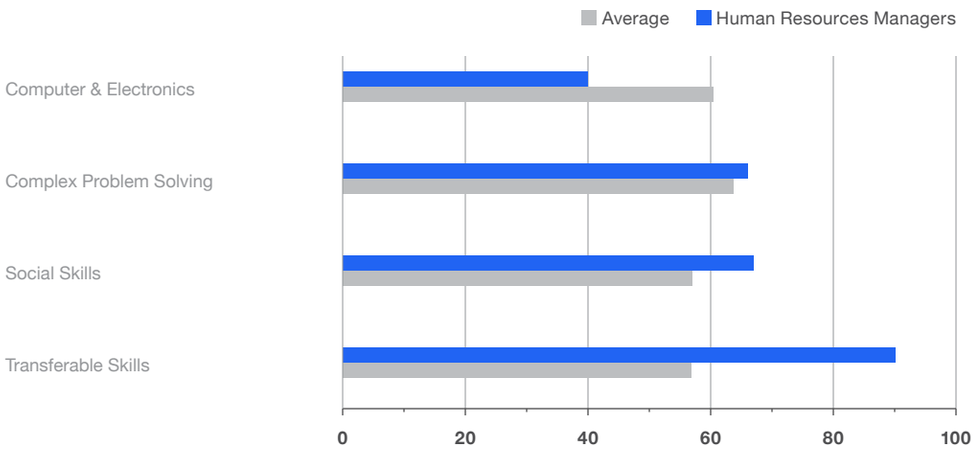
Sample job titles

- Human resources manager
- Human resources generalist
- Recruiting coordinator



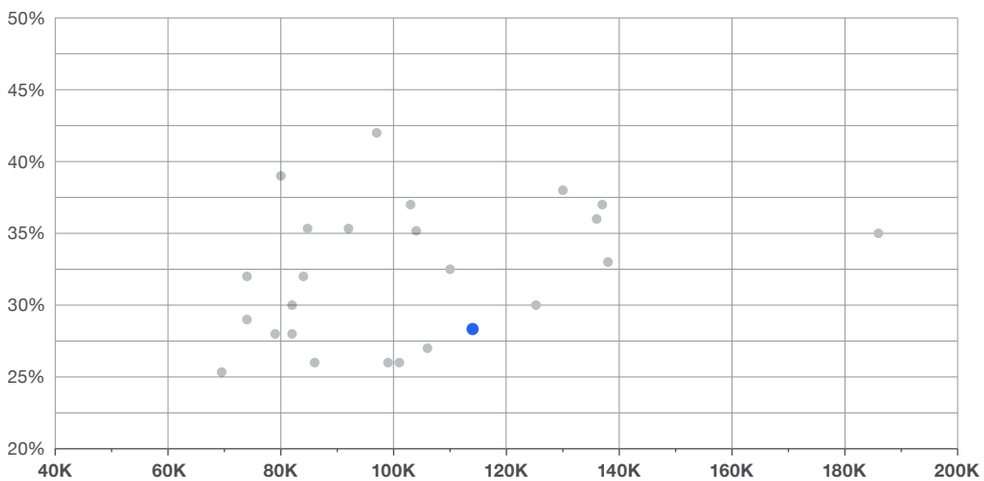
Skills

Human resources managers have a high transferable skills score. These jobs have low computer and electronics skills requirements, and above average complex problem solving and social skills requirements, compared to other opportunity jobs.



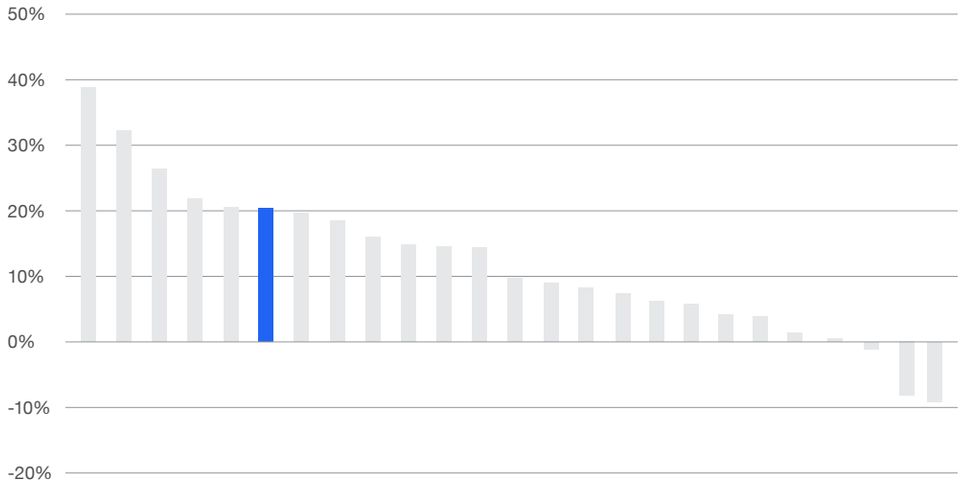
Salary and salary growth

Average annual salary for human resources managers is $114,140, salary growth is 28.6%.



Job postings growth

Among the top 25 opportunity jobs, postings for human resources managers rank 6th for job postings growth.



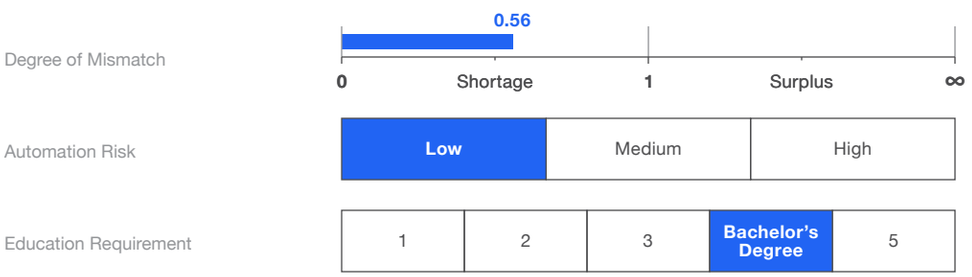
19. Sales Engineers

Key takeaways

- Sales engineers rank as the 3rd opportunity job by postings growth, 19th for volume of postings
- Among the top 25 opportunity jobs, sales engineers rank 10th for salary and are tied with admin services managers as 8th for salary growth

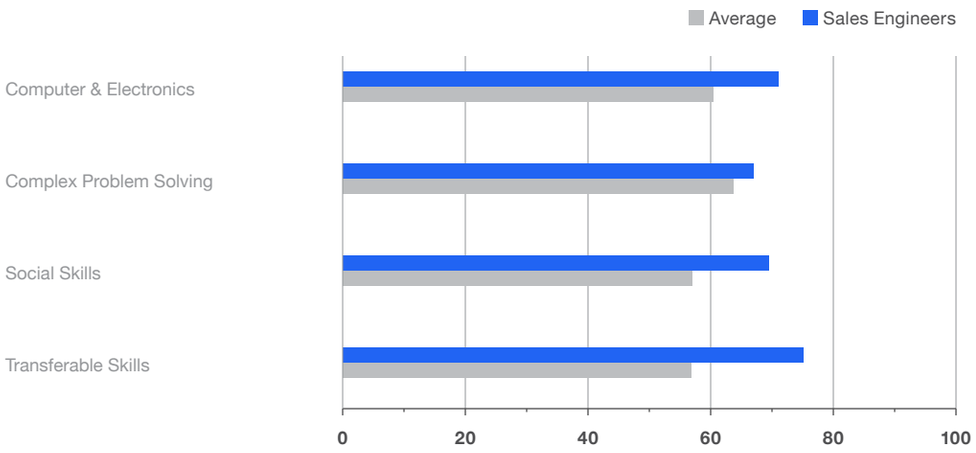
Sample job titles

- Sales engineer
- Account executive
- Sales specialist



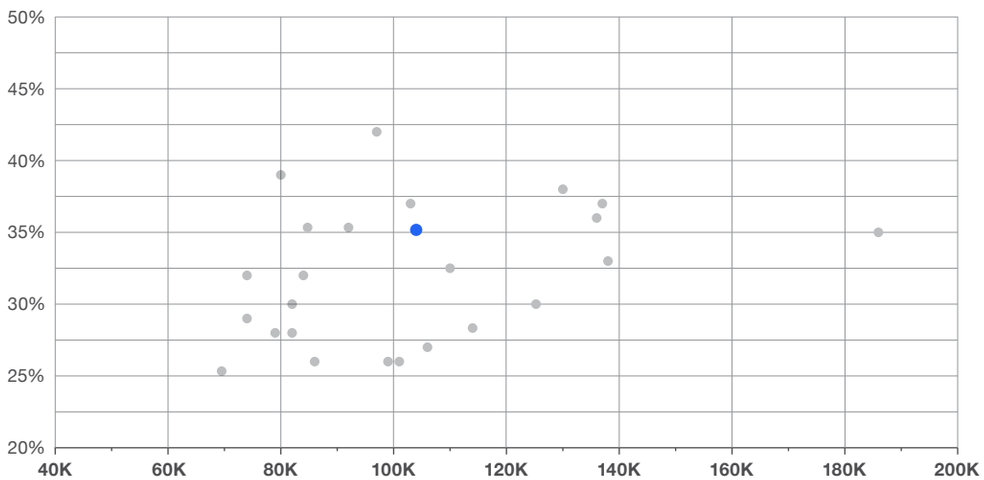
Skills

Sales engineers have a high transferable skills score. These jobs have above average computer and electronics, complex problem solving, and social skills requirements, compared to other opportunity jobs.



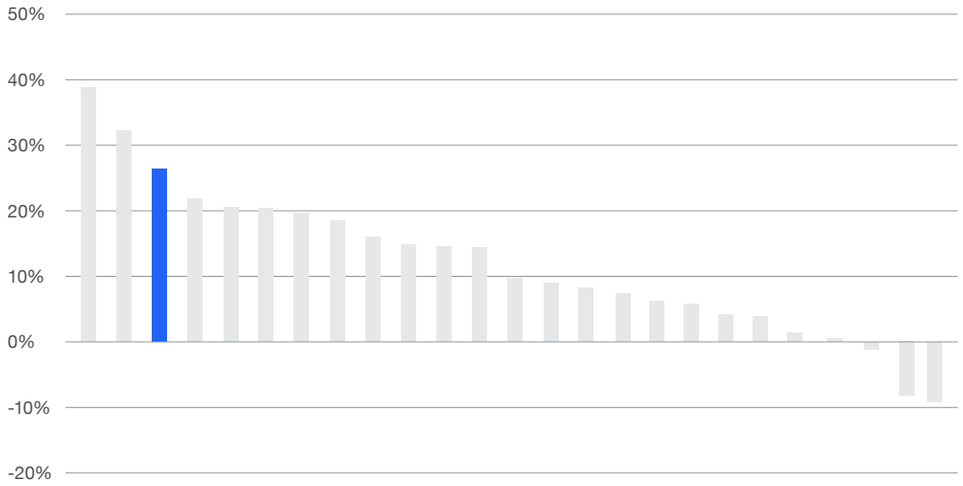
Salary and salary growth

Average annual salary for sales engineers is $104,660, salary growth is 35.4%.



Job postings growth

Among the top 25 opportunity jobs, postings for sales engineers rank 3rd for job postings growth.



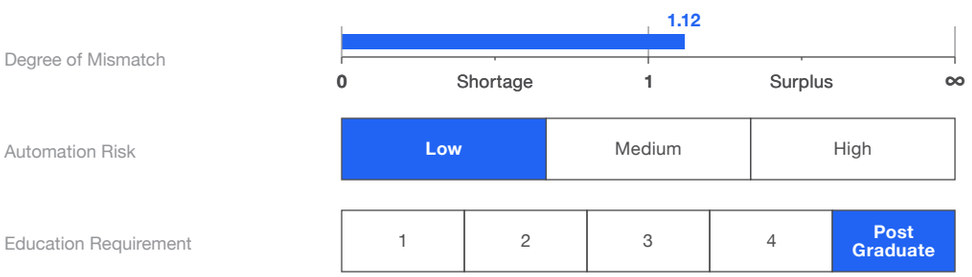
20. Financial Managers

Key takeaways

- Financial managers rank as the 14th opportunity job by postings growth, 20th for volume of postings
- Among the top 25 opportunity jobs, financial managers rank 5th for salary and 3rd for salary growth

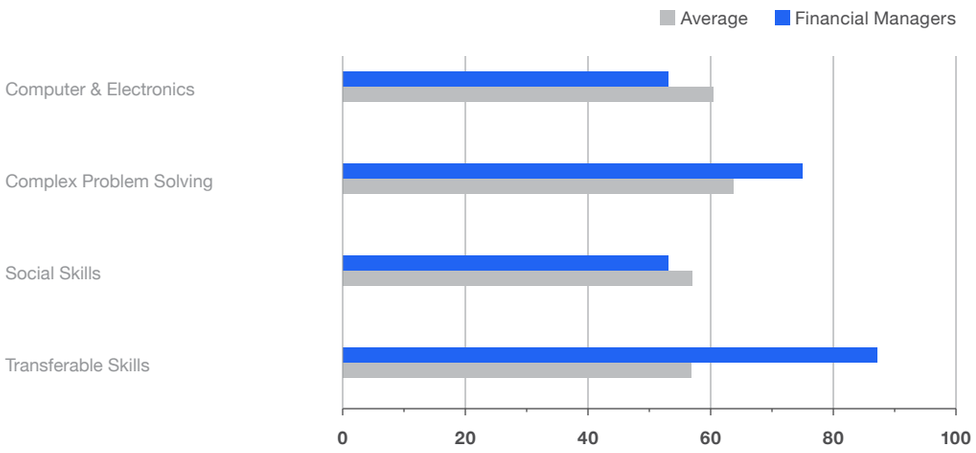
Sample job titles

- Branch manager
- Finance manager
- Audit manager



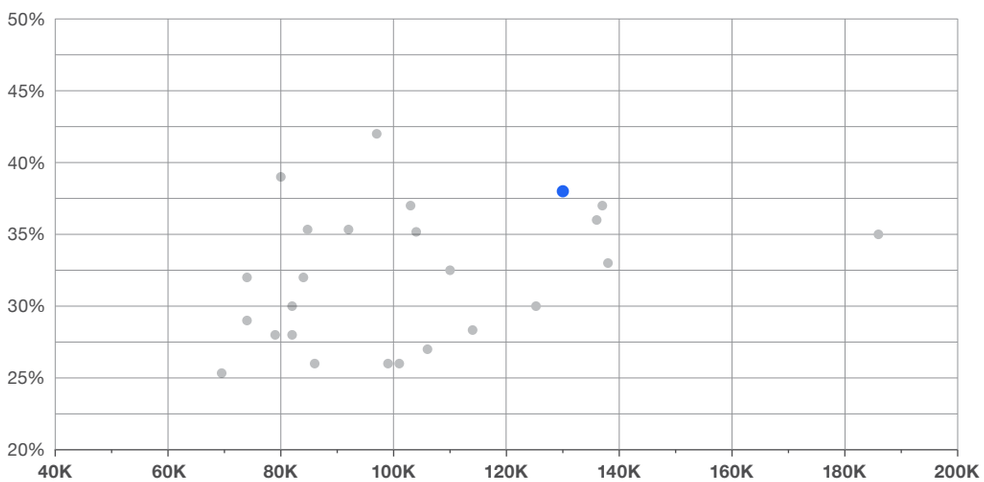
Skills

Financial managers have a high transferable skills score. These jobs have below average computer and electronics, high complex problem solving, and below average social skills requirements, compared to other opportunity jobs.



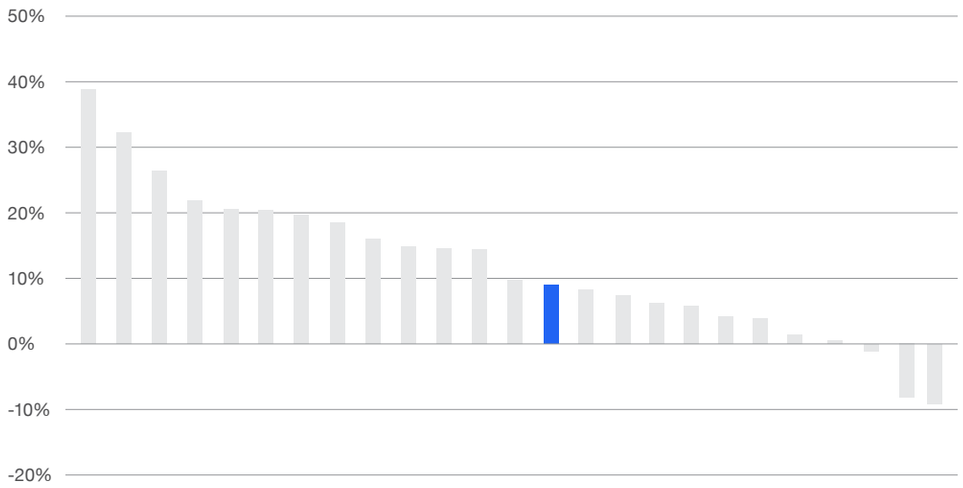
Salary and salary growth

Average annual salary for financial managers is $130,230, salary growth is 38.3%.



Job postings growth

Among the top 25 opportunity jobs, postings for financial managers rank 14th for job postings growth.



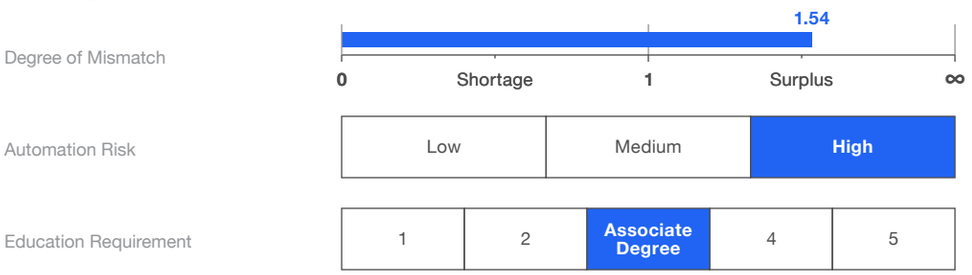
21. Administrative Services Managers

Key takeaways

- Administrative services managers rank as the 12th opportunity job by postings growth, 21st for volume of postings
- Among the top 25 opportunity jobs, they rank 15th for salary and are tied with sales engineers as 8th for salary growth

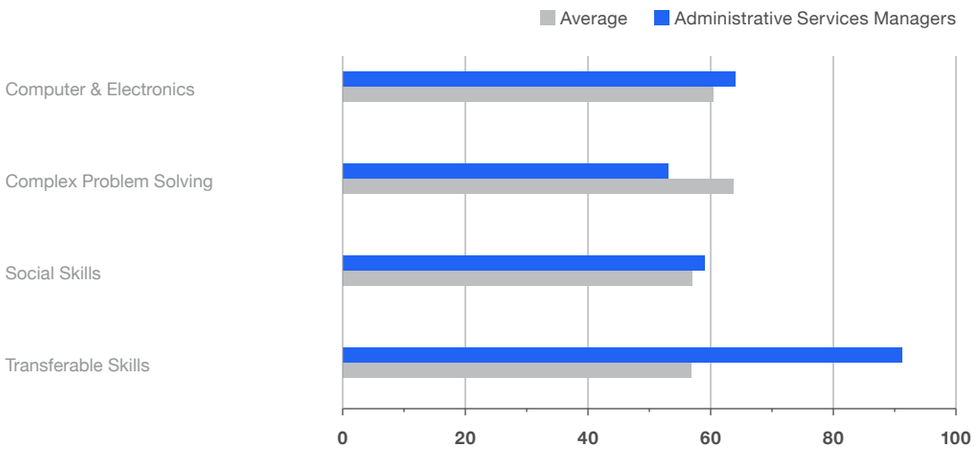
Sample job titles

- Administrative coordinator
- Business office manager
- Facilities coordinator



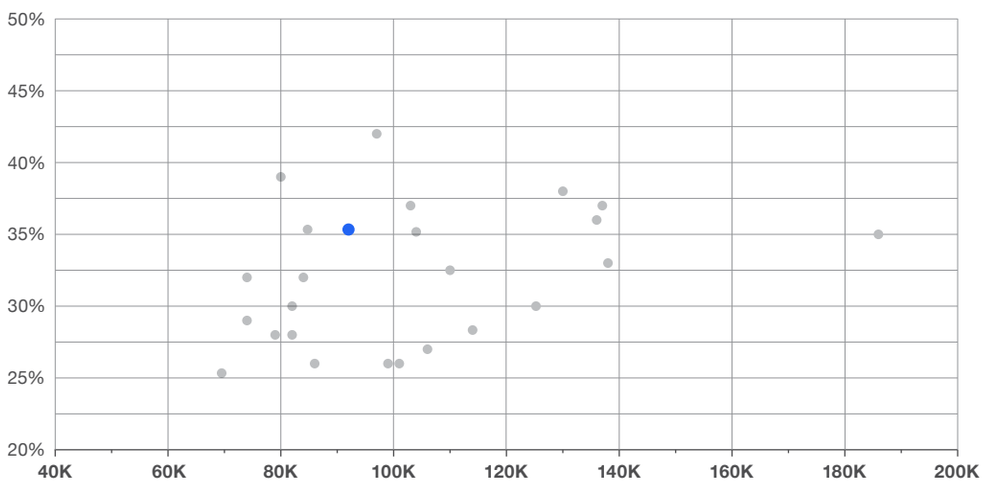
Skills

Administrative services managers have a high transferable skills score. These jobs have above average computer and electronics, below average complex problem solving, and above average social skills requirements, compared to other opportunity jobs.



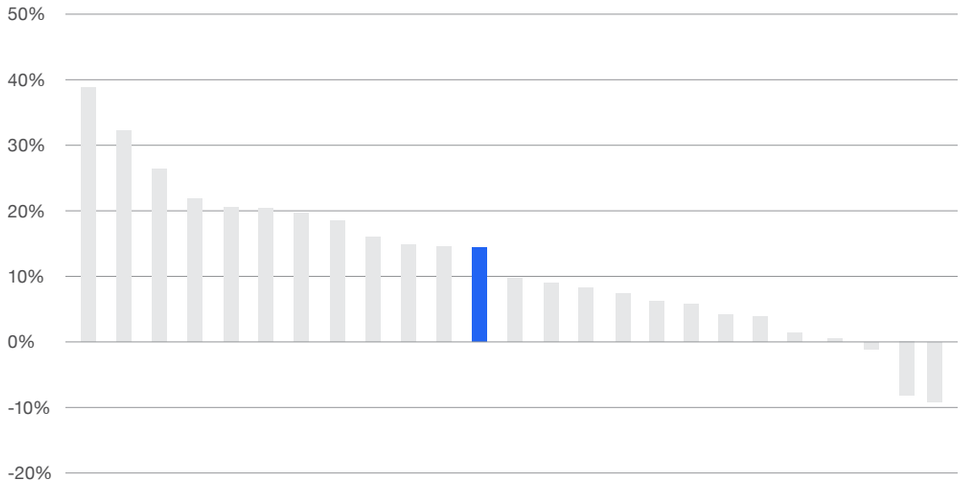
Salary and salary growth

Average annual salary for administrative services managers is $92,250, salary growth is 35.4%.



Job postings growth

Among the top 25 opportunity jobs, postings for administrative services managers rank 12th for job postings growth.



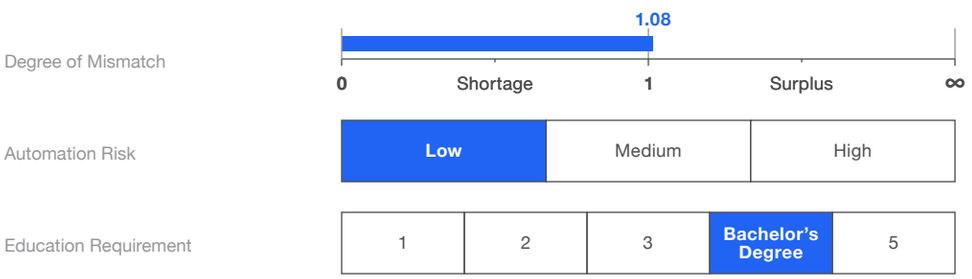
22. Industrial Production Managers

Key takeaways

- Industrial production managers rank as the 16th opportunity job by postings growth, 22nd for volume of postings
- Among the top 25 opportunity jobs, they rank 12th for salary and 23rd for salary growth

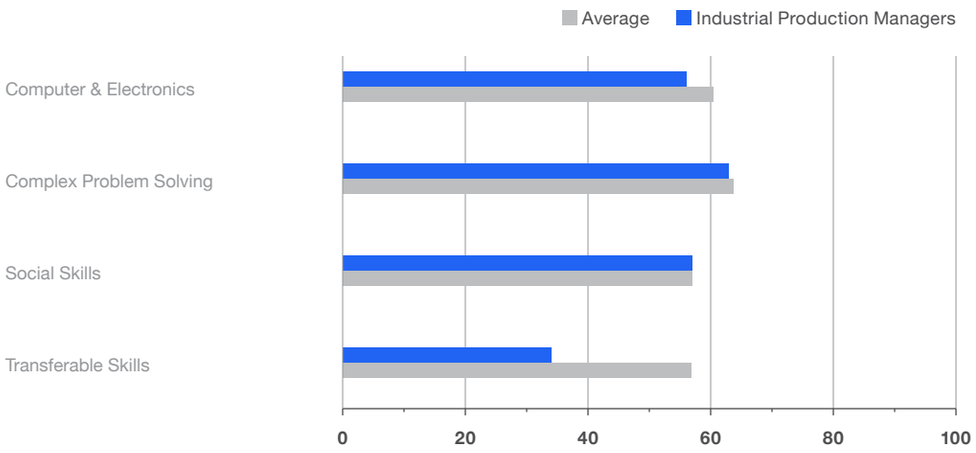
Sample job titles

- Product manager
- Quality manager
- Plant manager



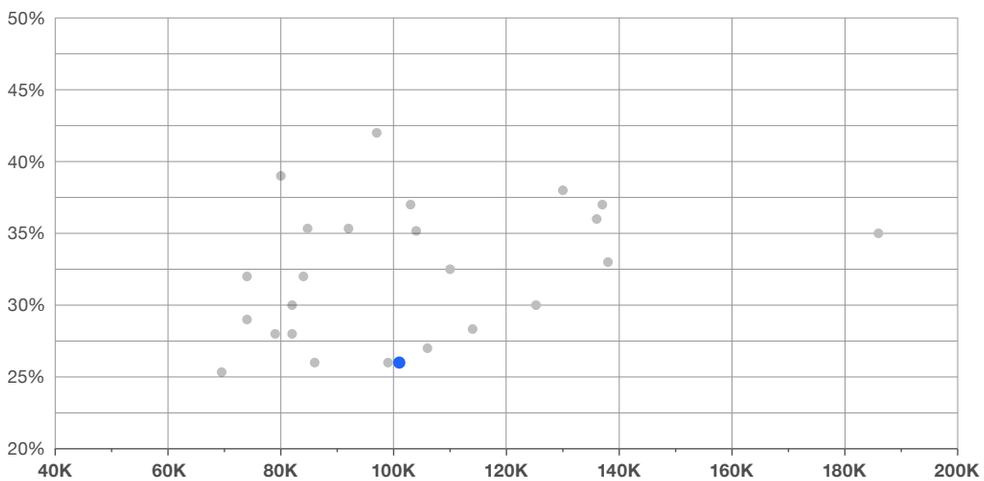
Skills

Industrial production managers have a low transferable skills score. These jobs have below average computer and electronics, complex problem solving, and average social skills requirements, compared to other opportunity jobs.



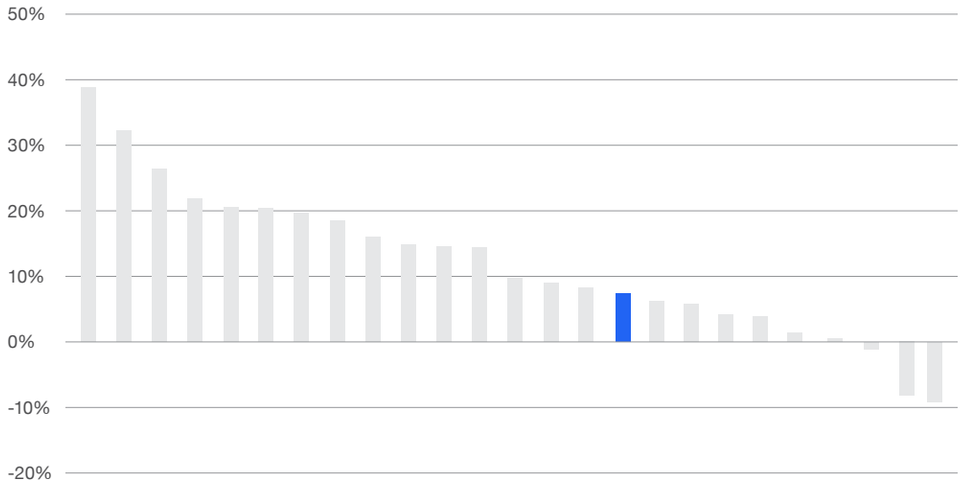
Salary and salary growth

Average annual salary for industrial production managers is $101,640, salary growth is 26%.



Job postings growth

Among the top 25 opportunity jobs, postings for industrial production managers rank 16th for job postings growth.



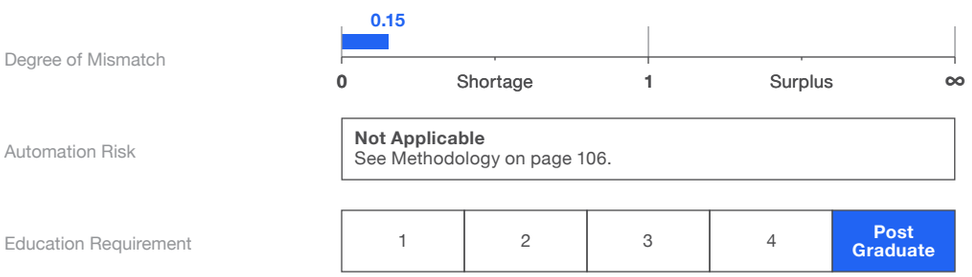
23. Family and General Practitioners

Key takeaways

- Family and general practitioners rank as the 4th opportunity job by postings growth, 23rd for volume of job postings
- Among the top 25 opportunity jobs, they rank 1st for salary and 10th for salary growth

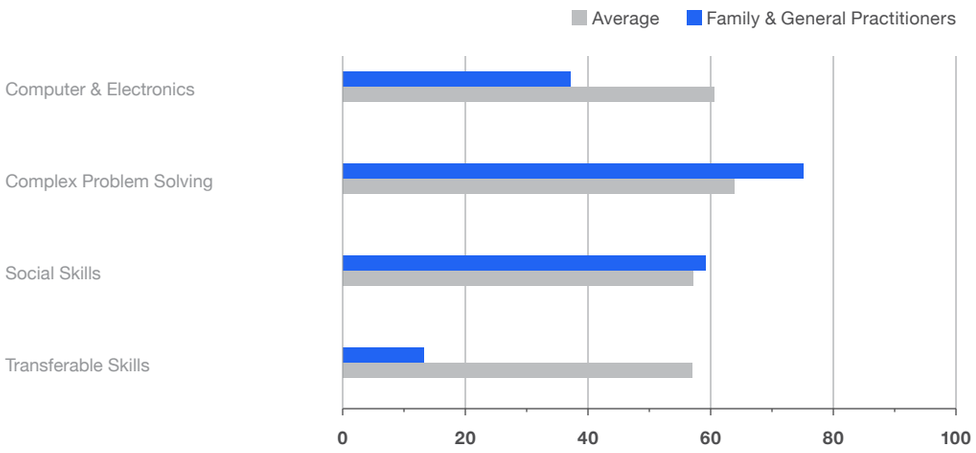
Sample job titles

- Family practice
- Internal medicine
- Family medicine physician



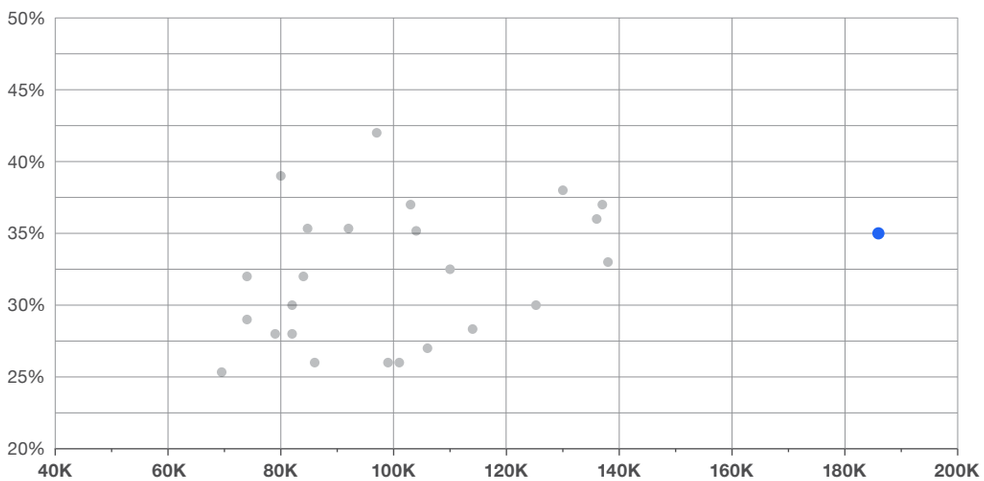
Skills

Family and general practitioners have a very low transferable skills score. These jobs have low computer and electronics, above average complex problem solving and social skills requirements, compared to other opportunity jobs.



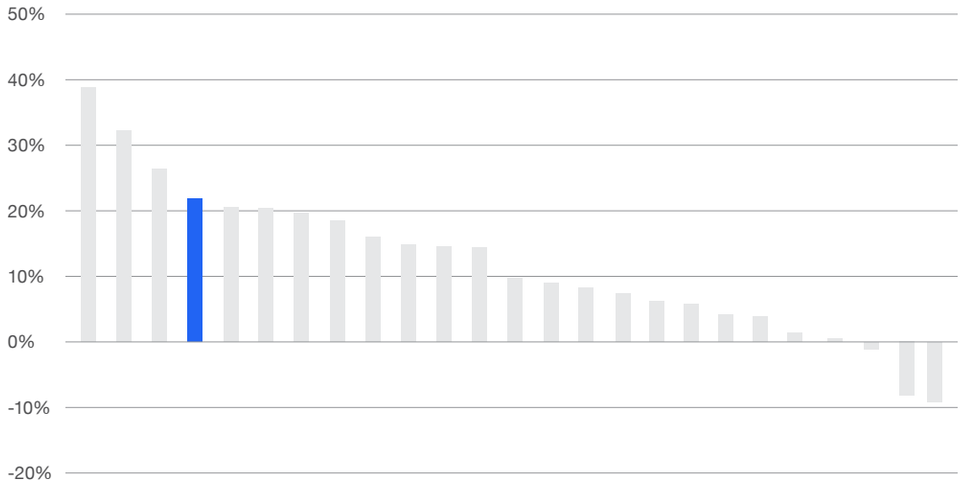
Salary and salary growth

Average annual salary for family and general practitioners is $186,320, salary growth is 35%.



Job postings growth

Among the top 25 opportunity jobs, postings for family and general practitioners rank 4th for job postings growth.



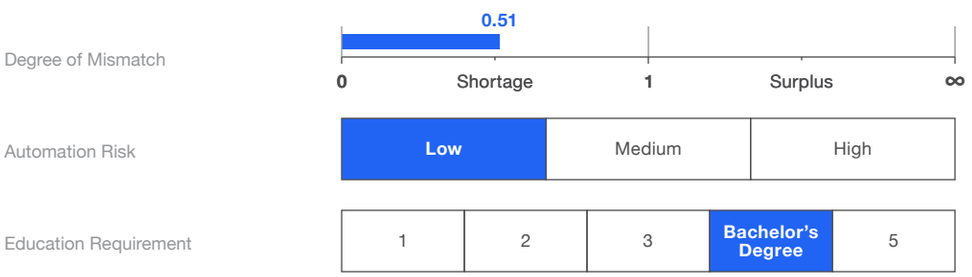
24. Database Administrators

Key takeaways

- Database administrators rank as the 21st opportunity job by postings growth, 24th for volume of postings
- Among the top 25 opportunity jobs, they rank 20th for salary and 20th for salary growth

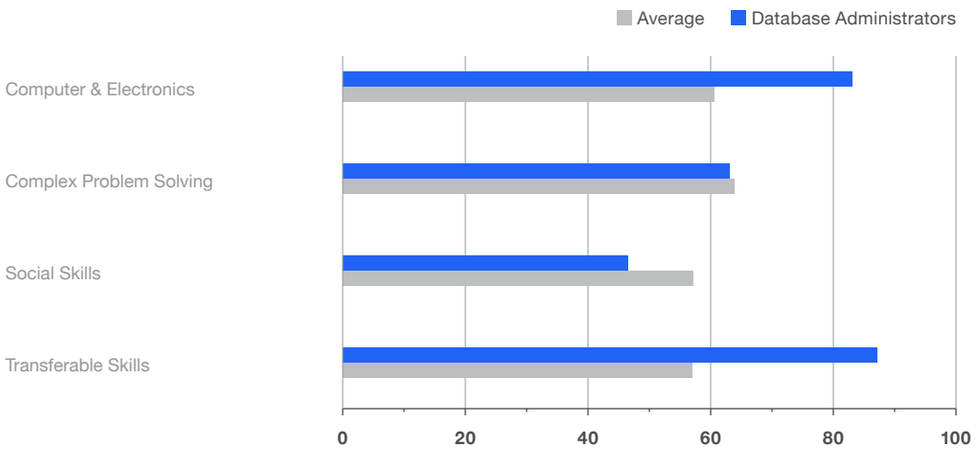
Sample job titles

- Database administrator
- Data architect
- Database developer



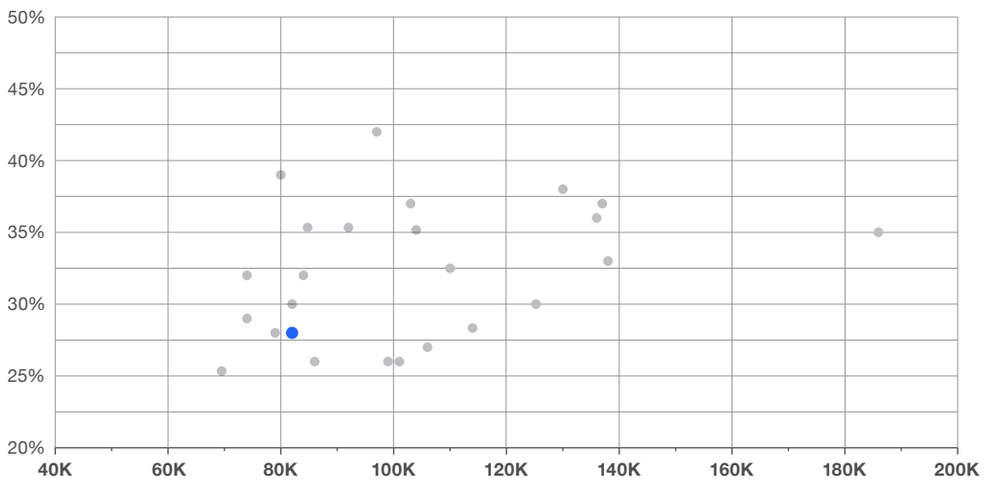
Skills

Database administrators have a high transferable skills score. These jobs have high computer and electronics, average complex problem solving and below average social skills requirements, compared to other opportunity jobs.



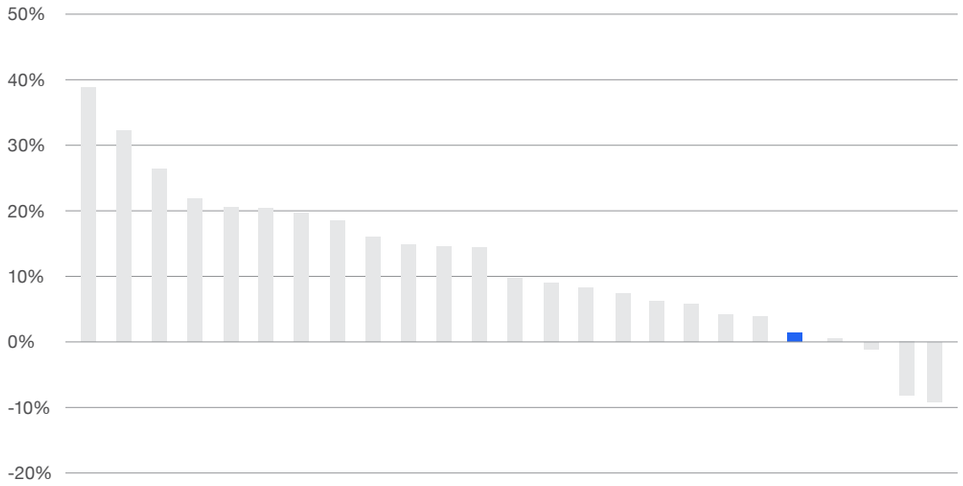
Salary and salary growth

Average annual salary for database administrators is $82,280, salary growth is 27.8%.



Job postings growth

Among the top 25 opportunity jobs, postings for database administrators rank 21st for job postings growth.



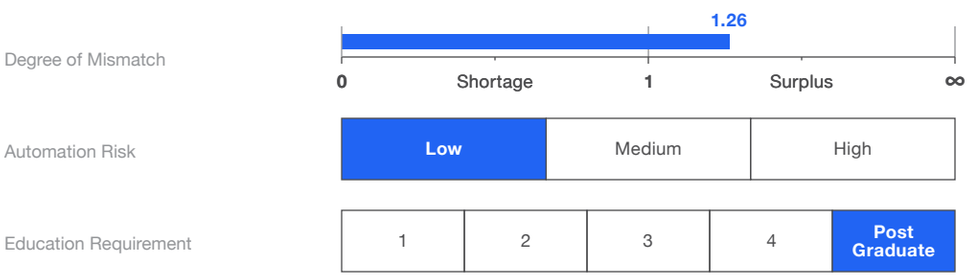
25. Operations Research Analysts

Key takeaways

- Operations research analysts rank as the 24th opportunity job by postings growth, 25th for volume of postings
- Among the top 25 opportunity jobs, they rank 19th for salary and 15th for salary growth

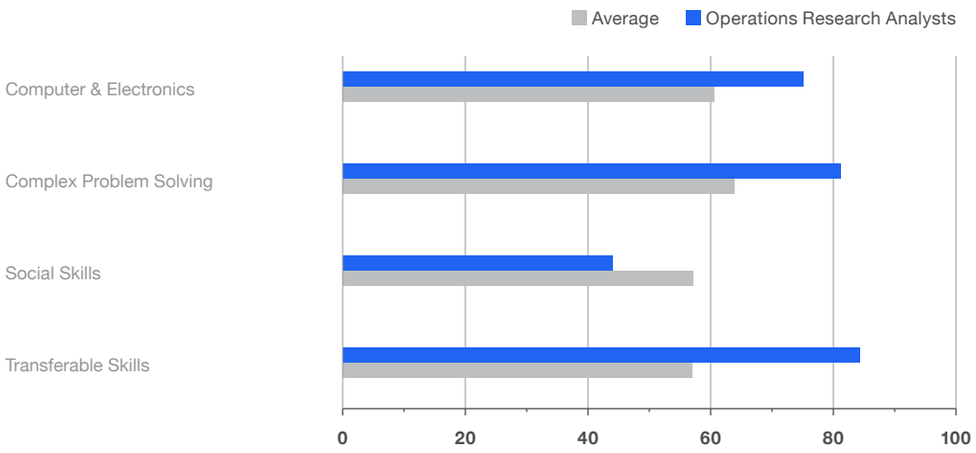
Sample job titles

- Intelligence analyst
- Operations analyst
- Supply Chain analyst



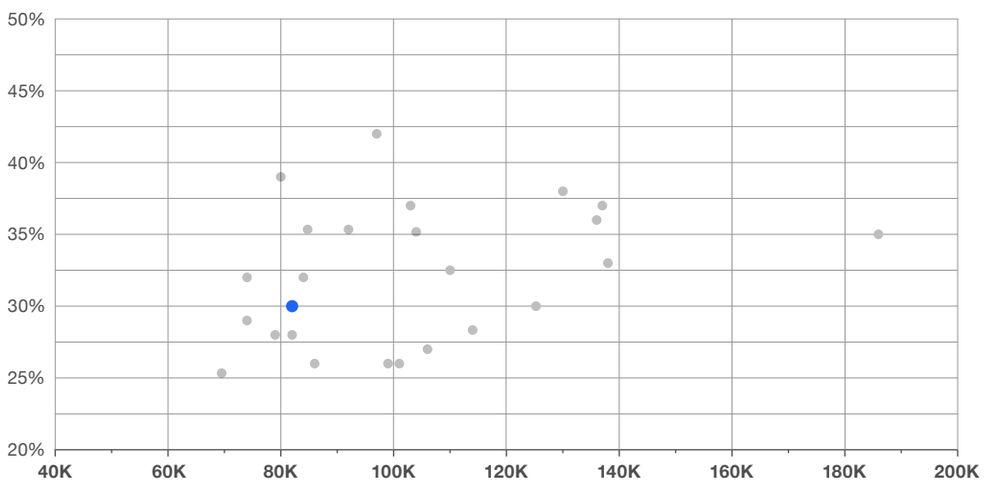
Skills

Operations research analysts have a high transferable skills score. These jobs have high computer and electronics and complex problem solving skills requirements. Below average social skills requirements, compared to other opportunity jobs.



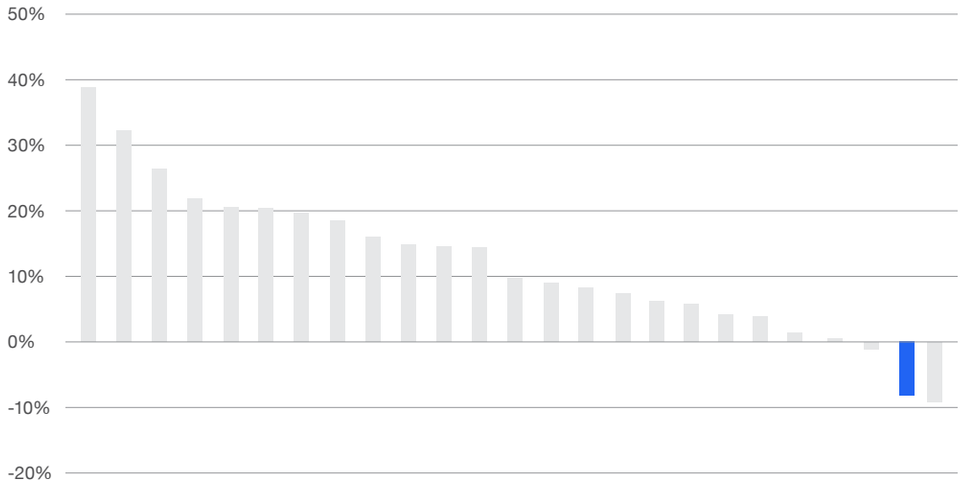
Salary and salary growth

Average annual salary for operations research analysts is $82,940, salary growth is 30.1%.



Job postings growth

Among the top 25 opportunity jobs, postings for operations research analysts rank 24th for job postings growth.



III. Data tables

Rank	Label	Mismatch	Postings Growth	Automation Risk	Education Requirement	Comp and Electronics	Complex Problem Solving	Social Skills	Occupational Dispersion	Average Salary	Salary Growth	Salary Rank	Salary Growth Rank
1	Registered Nurses	0.27	38.70%	Low	3	52	60	63	24	69,790	25.3	125	169
2	Sales Managers	0.76	14.90%	Low	4	42	66	72	87	126,040	30	19	87
3	Misc. Computer Occupations	0.48	6.20%	Low	4	86	60	39	76	85,520	35.9	74	43
4	Misc. Managers	0.83	14.50%	Low	4	50	63	61	86	110,210	33.1	30	59
5	Accountants And Auditors	1.03	16.00%	High	4	64	60	45	84	73,670	28.9	112	102
6	Software Developers, Applications	0.43	5.80%	Low	4	94	72	45	76	99,530	26.7	47	150
7	Physical Therapists	0.11	9.80%	Low	5	42	60	59	15	83,940	31.8	82	72
8	Network And Computer Systems Administrators	0.75	18.50%	Low	4	87	66	46	88	79,770	28	95	120
9	Medical And Health Services Managers	1.29	20.60%	Low	5	51	69	69	32	103,680	36.7	38	38
10	Computer And Information Systems Managers	0.93	3.90%	Low	4	88	72	61	86	136,280	36.1	15	42
11	Marketing Managers	1.45	19.70%	Low	4	63	66	62	88	137,400	37.4	13	36
12	Physician Assistants	0.36	-9.00%	Low	5	56	69	60	17	97,280	42	52	20
13	Software Developers, Systems Software	0.43	0.60%	Low	4	97	56	45	73	106,050	27.1	33	141
14	Speech-Language Pathologists	0.14	32.20%	Low	5	49	66	58	54	74,900	31.8	107	73
15	Computer Systems Analysts	0.8	4.20%	Low	4	90	60	48	82	87,320	25.7	68	161
16	Architectural And Engineering Managers	0.75	8.30%	Low	5	71	69	60	74	138,720	33.1	12	58
17	Occupational Therapists	0.15	-1.00%	Low	5	43	60	67	34	80,000	38.9	94	30
18	Human Resources Managers	2.34	20.40%	Low	4	40	66	67	90	114,140	28.6	25	111
19	Sales Engineers	0.56	26.40%	Low	4	71	66	69	75	104,660	35.4	36	44
20	Financial Managers	1.12	9.00%	Low	5	53	75	53	87	130,230	38.3	17	33

III. Data tables

Rank	Label	Mismatch	Postings Growth	Automation Risk	Education Requirement	Comp and Electronics	Complex Problem Solving	Social Skills	Occupational Dispersion	Average Salary	Salary Growth	Salary Rank	Salary Growth Rank
21	Administrative Services Managers	1.54	14.40%	High	3	64	53	59	91	92,250	35.4	58	45
22	Industrial Production Managers	1.08	7.40%	Low	4	56	63	57	34	101,640	26	43	157
23	Family and General Practitioners	0.15	22.00%	N/A	5	37	75	59	13	186,320	35	6	49
24	Database Administrators	0.51	1.50%	Low	4	83	63	46	87	82,280	27.8	88	125
25	Operations Research Analysts	1.26	-8.10%	Low	5	75	81	44	84	82,940	30.1	85	85
26	Chief Executives	1.44	32.40%	Low	5	31	85	71	92	180,700	28.3	7	117
27	Financial Analysts	1.51	10.30%	Low	4	62	66	46	75	92,250	29.4	59	94
28	Mechanical Engineers	0.83	4.80%	Low	4	70	69	48	64	87,140	25.4	69	167
29	Electrical and Electronics Engineering Technicians	1.15	3.50%	High	3	78	60	42	79	60,330	25.9	156	158
30	Human Resources Specialists	1.43	30.10%	N/A	4	51	50	51	89	62,590	31.9	147	70
31	Electrical Engineers	0.63	1.30%	Low	4	82	72	50	74	95,780	26.8	55	148
32	Chemical Engineers	0.72	2.50%	Low	4	60	75	46	66	103,590	32.8	39	61
33	Computer Network Architects	1.05	17.50%	N/A	4	87	64	47	79	100,710	57.2	45	10
34	Civil Engineers	0.63	10.40%	Low	4	54	72	53	62	87,130	27.6	70	130
35	Industrial Engineers	0.89	-4.30%	Low	4	62	69	50	49	85,110	25.5	75	164
36	Transportation, Storage, And Distribution Managers	1.72	1.40%	Medium	4	59	66	60	80	93,180	27.6	57	129
37	Social And Community Service Managers	1.93	31.40%	Low	4	54	69	67	59	67,730	28.5	135	115
38	Misc. Special Education Teachers	0.2	-14.60%	N/A	4	42	53	65	33	57,820	75	170	4
39	Medical and Clinical Laboratory Technologists	0.83	41.00%	High	4	47	56	48	20	60,560	27.2	155	140
40	Compliance Officers	1.59	18.70%	Low	4	56	66	50	73	68,000	29.3	132	97

III. Data tables

Rank	Label	Mismatch	Postings Growth	Automation Risk	Education Requirement	Comp and Electronics	Complex Problem Solving	Social Skills	Occupational Dispersion	Average Salary	Salary Growth	Salary Rank	Salary Growth Rank
41	Personal Financial Advisors	0.93	-29.20%	Medium	4	55	66	57	16	108,090	30.1	31	84
42	Education Administrators, Postsecondary	1.92	2.50%	Low	5	51	72	69	2	101,910	31.4	42	75
43	Physicians and Surgeons	0.09	-19.10%	Low	5	N/A	N/A	N/A	30	194,990	42.2	5	19
44	Public Relations and Fundraising Managers	2.06	21.80%	Low	4	50	66	64	88	115,400	38.2	23	34
45	Pharmacists	0.88	23.90%	Low	5	56	63	61	51	118,470	36.3	21	41
46	Property, Real Estate, and Community Association Managers	1.89	27.90%	High	4	55	50	61	44	65,880	30.8	137	82
47	Purchasing Managers	1.49	4.20%	Low	4	48	56	68	82	111,810	40.4	27	25
48	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	1.04	23.10%	Low	4	51	60	68	62	86,750	28.1	71	119
49	Technical Writers	0.94	9.70%	High	4	82	44	41	78	71,950	25.3	117	168
50	Police and Sheriff's Patrol Officers	3.39	19.20%	Low	3	47	50	58	6	59,560	27.8	161	127
51	Credit Analysts	1.36	6.90%	High	4	42	56	42	58	75,970	32	103	68
52	Public Relations Specialists	2.42	27.20%	Low	4	57	63	64	87	64,050	26.9	143	146
53	Emergency Management Directors	1.58	16.30%	Low	4	63	75	69	52	69,810	40.4	124	26
54	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	1.67	25.90%	Low	4	61	72	59	84	84,850	27.1	76	142
55	Training and Development Specialists	1.71	-4.20%	Low	4	48	56	65	91	61,530	27.2	151	139
56	Claims Adjusters, Examiners, and Investigators	1.79	2.10%	High	4	46	60	56	43	63,500	29.4	144	95
57	Materials Scientists	1.72	38.30%	Low	5	62	72	48	66	94,350	28.8	56	105
58	Computer Hardware Engineers	0.53	15.60%	Low	4	99	63	43	67	110,650	29.4	29	93

III. Data tables

Rank	Label	Mismatch	Postings Growth	Automation Risk	Education Requirement	Comp and Electronics	Complex Problem Solving	Social Skills	Occupational Dispersion	Average Salary	Salary Growth	Salary Rank	Salary Growth Rank
59	Mathematical Science Teachers, Postsecondary	0.27	10.40%	N/A	5	57	69	53	0	74,200	27.7	110	128
60	Dentists, General	0.29	10.40%	Low	5	46	75	65	6	166,810	25.7	9	160
61	Respiratory Therapists	0.75	-1.70%	Low	3	56	60	57	16	58,490	29.1	165	100
62	English Language and Literature Teachers, Postsecondary	0.74	-8.30%	N/A	5	54	60	56	0	68,390	28.8	129	107
63	Compensation and Benefits Managers	1.34	-0.10%	High	4	29	56	55	89	118,670	58.4	20	9
64	Marine Engineers and Naval Architects	0.49	8.60%	Low	4	68	66	52	65	99,160	35.1	48	48
65	Occupational Health and Safety Specialists	1.71	-1.30%	Low	4	53	75	56	84	70,470	29.5	122	92
66	Writers and Authors	1.83	-21.40%	Low	4	51	56	50	80	67,870	30.1	134	86
67	Training and Development Managers	1.75	18.70%	Low	4	48	66	66	91	111,030	44.3	28	16
68	Aerospace Engineers	0.66	1.10%	Low	4	71	72	51	63	107,700	28.8	32	104
69	Misc. Engineers	0.51	15.20%	Low	4	58	69	46	79	96,350	25.6	54	162
70	Misc. Social Workers	2.11	40.50%	N/A	5	N/A	N/A	N/A	52	58,410	40	168	28
71	Materials Engineers	1.28	-3.10%	Low	4	65	66	47	59	91,150	28.9	61	101
72	Art Directors	1.69	14.30%	Low	4	73	69	56	66	97,850	33.3	50	56
73	Editors	2.94	21.60%	Low	4	61	53	49	48	64,140	27.3	142	138
74	Advertising and Promotions Managers	1.37	9.10%	Low	4	61	63	59	83	114,700	44.7	24	15
75	Art, Drama, and Music Teachers, Postsecondary	0.83	55.70%	N/A	5	52	60	59	0	75,350	41.2	105	23
76	Electronics Engineers, Except Computer	0.61	1.20%	Low	4	92	75	51	80	99,660	26.8	46	147
77	Stationary Engineers and Boiler Operators	0.92	13.00%	High	3	42	50	42	83	58,070	28.6	169	113
78	Financial Examiners	1.57	8.90%	Low	4	42	69	60	59	86,460	31.8	72	71

III. Data tables

Rank	Label	Mismatch	Postings Growth	Automation Risk	Education Requirement	Comp and Electronics	Complex Problem Solving	Social Skills	Occupational Dispersion	Average Salary	Salary Growth	Salary Rank	Salary Growth Rank
79	Agents and Business Managers of Artists, Performers, and Athletes	1.32	12.20%	Low	4	46	63	67	22	97,220	36.5	53	39
80	Health Specialties Teachers, Postsecondary	0.39	87.10%	N/A	5	48	72	54	8	112,950	37	26	37
81	Electrical Power-Line Installers and Repairers	1.18	-44.20%	Low	3	31	56	45	60	64,990	33.8	139	52
82	Construction and Building Inspectors	1.25	16.10%	Medium	3	43	63	46	60	58,430	27.4	167	136
83	Chemistry Teachers, Postsecondary	0.38	10.70%	N/A	5	64	69	52	0	83,360	28.5	84	114
84	Mining and Geological Engineers, Including Mining Safety Engineers	0.8	6.00%	Low	4	56	75	46	67	100,970	35.3	44	47
85	Medical Scientists, Except Epidemiologists	1.04	13.30%	Low	5	60	72	51	73	90,160	32.1	65	66
86	Surgeons	0.16	6.40%	N/A	5	65	78	58	8	240,440	32.2	2	63
87	Business Teachers, Postsecondary	0.88	-14.30%	N/A	5	60	63	52	0	88,740	32.9	67	60
88	Producers and Directors	2.24	23.00%	Low	4	67	63	55	47	90,300	30	64	88
89	Chemists	1.9	0.20%	Low	4	61	69	44	73	79,140	26.8	99	149
90	Audiologists	0.55	-43.70%	Low	5	64	60	56	53	76,790	34.2	101	51
91	Environmental Scientists and Specialists, Including Health	2.67	29.10%	Low	4	61	66	52	63	72,050	28	116	121
92	Anesthesiologists	0.23	14.30%	N/A	5	44	75	55	5	246,320	41.1	1	24
93	Foreign Language and Literature Teachers, Postsecondary	0.75	60.10%	N/A	5	49	63	54	0	67,910	28.9	133	103
94	Insurance Underwriters	1.11	0.00%	High	4	48	60	46	8	70,570	28.6	121	112
95	Veterinarians	0.6	41.70%	Low	5	47	72	52	14	98,230	28.7	49	109
96	Postmasters and Mail Superintendents	0.94	30.30%	High	3	56	56	60	0	67,000	31.9	136	69

III. Data tables

Rank	Label	Mismatch	Postings Growth	Automation Risk	Education Requirement	Comp and Electronics	Complex Problem Solving	Social Skills	Occupational Dispersion	Average Salary	Salary Growth	Salary Rank	Salary Growth Rank
97	Computer Science Teachers, Postsecondary	0.54	29.10%	N/A	5	87	66	54	0	80,730	36.4	91	40
98	Nursing Instructors and Teachers, Postsecondary	0.88	24.50%	N/A	5	58	66	60	10	70,650	25.5	120	166
99	Physics Teachers, Postsecondary	0.24	4.80%	N/A	5	77	63	55	1	90,500	28.4	62	116
100	Surveyors	1.12	1.70%	Medium	4	72	60	50	45	60,310	27.6	157	131
101	Ship Engineers	0.52	11.10%	Low	3	53	60	42	40	74,600	29.9	109	89
102	Nurse Midwives	1.1	33.90%	N/A	5	45	69	60	23	97,700	164	51	1
103	Natural Sciences Managers	1.55	23.40%	Low	5	51	69	52	75	136,450	39.9	14	29
104	Detectives and Criminal Investigators	3.58	22.20%	Medium	3	69	66	59	1	80,540	41.6	92	21
105	Statisticians	1.18	16.90%	Low	5	76	66	41	82	84,010	31.4	81	76
106	Communications Teachers, Postsecondary	1.39	-2.80%	N/A	5	51	63	56	0	69,230	28.8	127	106
107	Broadcast News Analysts	1.31	-23.90%	Low	4	64	63	56	6	84,380	38.5	79	32
108	Epidemiologists	1.31	27.90%	Low	5	68	75	57	66	74,120	31	111	79
109	Power Plant Operators	2.13	-3.40%	High	2	41	53	38	41	69,220	32.1	128	67
110	Elevator Installers and Repairers	0.94	12.70%	Medium	3	62	63	43	20	76,490	30.4	102	83
111	Biochemists and Biophysicists	1.18	54.70%	Low	5	63	72	48	63	91,960	27.4	60	133
112	Nuclear Technicians	1.91	40.60%	High	3	45	60	33	63	75,960	26.2	104	154
113	Captains, Mates, and Pilots Of Water Vessels	2.4	13.80%	Low	3	48	72	60	41	79,180	51	98	14
114	Commercial Pilots	1.57	28.80%	Medium	3	55	63	48	69	82,430	27.9	87	123
115	Transportation Inspectors	1.63	-0.40%	High	3	68	60	48	64	70,820	40.2	119	27
116	Electrical and Electronics Drafters	0.86	1.40%	High	3	61	50	45	74	62,040	29.3	149	98

III. Data tables

Rank	Label	Mismatch	Postings Growth	Automation Risk	Education Requirement	Comp and Electronics	Complex Problem Solving	Social Skills	Occupational Dispersion	Average Salary	Salary Growth	Salary Rank	Salary Growth Rank
117	Farmers, Ranchers, and Other Agricultural Managers	1.09	14.10%	Low	3	21	63	63	65	72,570	32.2	114	64
118	Radiation Therapists	1.36	16.90%	Medium	3	63	53	51	11	83,710	33.3	83	57
119	Insurance Appraisers, Auto Damage	1.59	27.40%	High	3	67	47	42	4	64,750	33.6	140	53
120	Petroleum Pump System Operators, Refinery Operators, And Gaugers	1.16	58.50%	High	2	41	60	41	64	63,160	26.1	146	156
121	Economics Teachers, Postsecondary	0.29	-36.60%	N/A	5	64	60	52	0	102,120	37.9	40	35
122	Film and Video Editors	2.99	-33.60%	Medium	3	73	53	45	36	75,090	42.6	106	17
123	Oral and Maxillofacial Surgeons	0.24	-27.40%	Low	5	50	78	54	6	219,600	29.5	3	91
124	Petroleum Engineers	1.23	-35.60%	Low	4	70	72	54	50	147,520	58.9	11	8
125	Political Science Teachers, Postsecondary	0.61	-5.60%	N/A	5	62	66	52	0	82,670	26.2	86	153
126	Engineering Teachers, Postsecondary	0.57	25.60%	N/A	5	71	60	54	0	102,000	29.3	41	96
127	Recreation and Fitness Studies Teachers, Postsecondary	1.06	-15.60%	N/A	5	48	66	55	2	65,220	34.8	138	50
128	Misc. Therapists	1.45	37.80%	N/A	5	N/A	N/A	N/A	37	59,190	31.8	163	74
129	Avionics Technicians	1.21	-16.40%	High	3	84	63	45	69	58,460	27.1	166	143
130	Nurse Anesthetists	0.61	49.90%	N/A	5	47	72	57	10	158,900	74.6	10	5
131	Cartographers and Photogrammetrists	1.2	85.40%	High	4	74	56	46	62	64,570	29.7	141	90
132	Biological Scientists	2.66	12.10%	N/A	5	53	66	48	61	79,200	26.1	97	155
133	Sound Engineering Technicians	1.48	123.10%	Low	3	86	56	49	53	58,670	27	164	145
134	Power Distributors and Dispatchers	1.64	-13.70%	Medium	3	54	60	45	55	78,170	33.5	100	54
135	Mathematical Technicians	0.27	14.20%	High	4	75	69	13	76	62,280	41.6	148	22

III. Data tables

Rank	Label	Mismatch	Postings Growth	Automation Risk	Education Requirement	Comp and Electronics	Complex Problem Solving	Social Skills	Occupational Dispersion	Average Salary	Salary Growth	Salary Rank	Salary Growth Rank
136	Misc. Legal Support Workers	2.56	77.90%	N/A	3	N/A	N/A	N/A	57	63,340	38.8	145	31
137	Library Science Teachers, Postsecondary	0.88	83.20%	N/A	5	77	66	55	0	72,440	31	115	80
138	Physicists	1.3	42.50%	Low	5	77	78	52	71	117,300	31.1	22	78
139	Animal Scientists	1.96	17.00%	Low	5	56	72	52	75	72,590	52.3	113	12
140	Sociology Teachers, Postsecondary	0.87	-31.60%	N/A	5	65	60	55	0	74,860	25.8	108	159
141	Economists	1.88	10.10%	Medium	5	53	72	48	66	105,290	32.4	35	62
142	Makeup Artists, Theatrical and Performance	2.72	60.70%	Low	3	34	47	46	56	60,830	80.3	154	2
143	Environmental Science Teachers, Postsecondary	1.45	26.90%	N/A	5	70	66	55	0	86,200	30.9	73	81
144	Misc. Financial Specialists	2.11	10.90%	Medium	4	61	60	47	77	71,230	27.4	118	134
145	Home Economics Teachers, Postsecondary	0.45	-16.70%	N/A	5	65	60	54	0	68,030	33.4	131	55
146	First-Line Supervisors Of Police and Detectives	2.19	29.70%	Low	3	55	66	64	5	84,260	27.3	80	137
147	Law Teachers, Postsecondary	1.24	16.10%	N/A	5	53	63	55	0	126,270	32.1	18	65
148	Architecture Teachers, Postsecondary	0.81	15.70%	N/A	5	63	69	56	0	84,470	28.2	78	118
149	Airline Pilots, Copilots, and Flight Engineers	2.36	39.60%	Low	4	66	72	53	13	131,760	12.6	16	170
150	Atmospheric, Earth, Marine, And Space Sciences Teachers, Postsecondary	0.75	38.40%	N/A	5	74	66	55	0	90,340	27.9	63	122
151	Nuclear Power Reactor Operators	1.46	11.60%	High	3	46	69	49	29	82,270	26.6	89	151
152	Orthodontists	0.39	35.20%	Low	5	40	72	58	0	201,030	31.2	4	77
153	Genetic Counselors	1.41	37.50%	N/A	5	36	75	55	16	69,540	79.6	126	3

III. Data tables

Rank	Label	Mismatch	Postings Growth	Automation Risk	Education Requirement	Comp and Electronics	Complex Problem Solving	Social Skills	Occupational Dispersion	Average Salary	Salary Growth	Salary Rank	Salary Growth Rank
154	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	1.97	-12.50%	Medium	3	65	56	44	47	70,110	29.2	123	99
155	Rotary Drill Operators, Oil and Gas	2.59	-20.50%	Medium	2	17	53	49	6	61,070	55.2	153	11
156	Anthropologists and Archeologists	1.96	-7.40%	Low	5	52	72	50	54	61,980	28.7	150	110
157	Subway and Streetcar Operators	2.49	12.10%	High	2	40	50	46	13	59,230	27.5	162	132
158	Geoscientists, Except Hydrologists and Geographers	2.46	-43.60%	Medium	4	59	72	47	71	105,390	35.3	34	46
159	Hydrologists	2.68	-14.80%	Low	4	62	63	48	53	81,930	27.8	90	126
160	Misc. Rail Transportation Workers	0.77	-9.10%	N/A	2	0	0	0	43	59,950	51.4	159	13
161	Signal And Track Switch Repairers	3.48	-36.30%	High	3	73	63	39	31	59,920	27.4	160	135
162	Misc. Psychologists	1.2	-25.10%	Low	5	47	78	60	52	89,810	27.8	66	124
163	Social Scientists and Related Workers, All Other	2.09	24.00%	Low	4	52	69	55	54	80,040	25.6	93	163
164	Mathematicians	1.96	-11.40%	Low	5	74	75	39	72	104,350	28.7	37	108
165	Boilermakers	4.01	-0.90%	Medium	3	30	50	39	53	60,170	26.3	158	152
166	Forestry and Conservation Science Teachers, Postsecondary	1.74	-18.10%	N/A	5	66	66	57	0	84,810	27	77	144
167	Artists and Related Workers, All Other	2.16	-21.50%	N/A	4	N/A	N/A	N/A	69	61,410	60.6	152	6
168	Misc. Dentist Specialists	0.87	-51.20%	N/A	5	N/A	N/A	N/A	51	168,580	59	8	7
169	Misc. Media and Communication Equipment Workers	1.43	22.20%	N/A	3	N/A	N/A	N/A	71	68,220	42.6	130	18
170	Misc. Life Scientists	2.51	340.00%	N/A	5	N/A	N/A	N/A	81	79,270	25.5	96	165

Data sources

The key source for all Indeed Hiring Lab research is the aggregated and anonymized data from job seeker and employer behavior on Indeed. The job posting data on Indeed includes millions of jobs from thousands of sources. It is important to note that Indeed job postings do not reflect the precise number of jobs available in the labor market, as an opening may be listed on more than one website and could remain online for a period of time after it has been filled. Moreover, employers sometimes use a single job posting for multiple job openings. However, the data do represent a broad measure of each job title's share of job openings in the labor market.

This global report is based on data from March 1, 2015, to March 1, 2016, from key markets with a significant number of jobs postings in English: the United States, the United Kingdom, Ireland, Australia, Canada, Singapore, Luxembourg, and Hong Kong.

External sources are cited throughout the text and include the Bureau of Labor Statistics, US Census Bureau, Pew Research Center, International Labour Organisation, Occupational Information Network (O*NET), and University of Oxford.

Methodology

Categorizing opportunity jobs

We used the set of occupational categories defined by the Standard Occupational Classification (SOC) system which is used by US statistical agencies and classifies workers based on the work they perform, rather than the industry in which they perform it. The occupation categories that had salary growth from 2004 to 2014 greater than 25.3% and an average salary in 2014 as reported by the US Bureau of Labor Statistics that was greater than $57,700 are classified as opportunity jobs, while the remaining occupations were clustered together to compare against the opportunity jobs.

Risk of automation

In "The Future of Employment: How Susceptible are Jobs to Computerization?," Carl Benedikt Frey and Michael A. Osborne calculated a risk of automation score for 702 of the 800 SOC occupation categories. Each of the 702 occupations were assigned a risk score between 0 and 1 with high risk occupations falling above the threshold of .7. Only considering the 702 occupations that were assigned automation scores, we found the share of job postings that fell into high-risk automation occupation groups for both the opportunity job cluster and the other job cluster. This Indeed study covers more occupations than Frey and Osborne's study. As a result, we do not have automation risk figures for all occupations in this report. The absence of this data is marked as "not applicable" where appropriate.

Transferable skills score

The BLS constructed the Herfindahl-Hirschman Index to measure the occupational dispersion across industries for each of the SOC occupation categories where a maximum value of 10,000 means an occupation is entirely concentrated in one industry. We converted this to a scale of 0 to 100–0 being not diverse at all and entirely concentrated in one industry, and 100 being completely diverse and evenly spread across all industries. We then found the weighted average by postings for the opportunity job cluster and other job cluster.

Talent mismatch

Employer demand is measured as the percent of job postings in each occupation category relative to all job postings. Job seeker interest is measured as the percent of job seeker clicks in each occupation category relative to all job seeker clicks. We found the ratio of job seeker interest to employer demand for each of the occupation categories and then found the share of occupations that had a score below 1 (job seeker/talent deficit) for the opportunity job cluster and the other job cluster.

Educational requirements

Each of the SOC occupation categories is assigned to one of five job zones by the O*NET database based on the education, work experience, and job training needed for the position. When discussing specific education levels we followed the O*NET classifications and assigned job zone 2 to high school, job zone 3 to an associate degree, job zone 4 to a bachelor's degree, and job zone 5 to a postgraduate degree. In analyzing the college requirements for the opportunity job cluster and other job cluster, we considered occupations in job zones 1 to 3 as not requiring a college education and occupations in job zones 4 to 5 as requiring a college education.

Skill requirements

Each of the SOC occupations is also assigned an importance score for a variety of different skills by the O*NET database. We focused on the computer and electronics knowledge score, the complex problem solving score, and the social skills score. O*NET skills data breaks social skills down into 6 specific skills, so we calculated the average social skill score based on these 6 measures: coordination, instructing, negotiation, persuasion, service orientation, and social perceptiveness. We then found the weighted average by postings for the opportunity job cluster and other job cluster.

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V. About the author

Tara M. Sinclair, PhD, is chief economist at Indeed and an associate professor of economics and international affairs at The George Washington University. Her research focuses on examining historical patterns in data to understand both the current and past structure of the labor market and to forecast future movements. Under Tara's direction, the Indeed Hiring Lab is developing original research using proprietary Indeed data to uncover exclusive insights into the labor market. In addition to conducting her research, Tara is frequently invited to brief the media on economic and labor trends as well as offer commentary. She has been quoted in the New York Times, the Wall Street Journal, and the Washington Post, and she has appeared on CNN, C-Span, NPR, Fox Business, Bloomberg Radio and TV, and many other local and international news programs.

VI. About us

About the Indeed Hiring Lab

The Indeed Hiring Lab is a global research institute committed to advancing the knowledge of human resource and talent management professionals worldwide.

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