



2018

Bridging the Skills Gap

An Analysis of Job Ads and Resumes and
How They Contribute to Employer-Jobseeker Friction

 **LiveCareer**

A Study Conducted by LiveCareer in Conjunction with TIRO Communications

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Defining the Problem

Is There a Skills Gap—and Where

Companies claim they cannot find workers with the right skill sets, while workers complain that their existing skills are becoming obsolete due to technological change and automation of various job functions. Less skilled workers simply are not fits for many jobs in the digital age.

However, the results of a study reported in *MIT Technology Review* call this widely accepted conclusion into question. Employers looking for workers with higher level technical skills generally do not have a hard time filling job openings.¹

This conclusion seems to run counter to most studies, which claim the skills gap is real—a divide that is exacerbated by unemployment dipping below 5 percent and experienced workers with the right skills becoming a scarcity. In a near-full employment economy, 95 percent of companies in a recent Business Roundtable survey indicate they are having problems finding workers with the skills they need.²

So, is there a skills gap or not?

While skill gaps certainly exist across multiple—and often the majority—of occupational sectors, many of them are occupation-specific.

As the study in *MIT Technology Review* concludes, the skills-gap question cannot be answered by taking a broad brush across the workforce as a whole. Specifically, while skill gaps certainly exist across multiple—and often the majority—of occupational sectors, many of them are occupation-specific. Further, skills gaps do not confine themselves to hard or soft skillsets, but rather each job category experiences its own set of mixed hard and soft skills gaps. At the same time, there are skill areas where little or no gap exists between jobseekers and employers. In short, the job market needs to be analyzed as a segment of micro job markets, with a distinct skills gaps profile for each job title category.

Our Methodological Approach

In Search of the Skills Gap

Seeking to understand what skills employers want and, conversely, what skills jobseekers offer, deem most important, and believe employers find most useful, we took a “big data” approach to analyzing thousands of resumes and job ads across 12 different occupations. In total, these occupations represent nearly one-quarter of the workforce in the United States.³

Apart from analyzing job ads as a singular data set and resumes as a singular data set, we also compared required skills listed in job ads versus skills promoted in jobseeker resumes. This analysis looked for both areas of job ad-resume alignment as well as divergence (i.e., where hiring organizations and jobseekers seem to be talking past each other or ignoring each other's needs or attributes).

The methodological approach taken in our analysis leveraged Cognition Insights, a natural language processing (NLP) tool created by TIRO Communications.

This report on skills gaps is the first in a three part series of studies using Cognition Insights to go deep into important areas of job market dynamics. Part Two will examine demographic issues, such as career tenure, job hopping, and education, while Part Three will look at jobseeker personality profiles in the areas of emotional, social, and language intelligence.

12 Occupations Analyzed for Skills Gaps



Caregivers



Accountants



Sales Associates



Registered Nurses



Servers



Bartenders



Administrative Assistants



Customer Service Representatives



Software Developers



Cashiers



Teachers



Store Managers

Key Job Skills Takeaways

Our analysis uncovered some interesting findings regarding jobs skills. Employers can use the insights to optimize job postings to attract better suited applicants and improve ongoing training and development programs. Jobseekers can also use the information presented here to better align their stated skill sets to employers' stated requirements. Additionally, jobseekers can take pointers on overcoming perceived skills gaps through training and professional development.

Some of the key insights that emerge from the analysis include:

SKILLS GAP

There is a significant gap between the number of skills listed on job ads and those mentioned in resumes.

Individual job ads list an average of 21.8 skills, while resumes list an average of only 13 skills.

The skills gap applies to both hard and soft skills. Job ads include an average of 16.7 hard skills, but resumes include only 9.8 hard skills. Job ads list an average of 5.2 soft skills but resumes include only 3.2. **This equates to a 59 percent hard skill match ratio and 62 percent match ratio for soft skills (viz., jobseeker matches in resumes vs. what employers list in job ads).**

Some of the most significant skill gaps between employers and jobseekers include multitasking, retail industry knowledge, positive attitude, and physical demand. Jobseekers who include these attributes on their resumes (recognizing that some skills are more occupation-specific than others) raise their chances of being noticed by potential employers.

EMPLOYER PREFERENCES

Soft skills continue to play an essential role for employers. On average, job ads list 5.2 soft skills, with some occupations listing almost twice as many desirable soft skills. Soft skill-intensive occupations include customer service representatives, administrative assistants, and software developers.

Employers increasingly value customer service and communications skills. In job ads, customer service appears in 11 of the 12 occupational types. This indicates that employers expect roles traditionally separated from customer service—such as accountants, teachers, and registered nurses—to make those skills a focus today. Communication skills appear in job ads for 12 of the 12 occupation types.

Tech-centric employers demand largely the same soft skills as customer-facing employers. Three of the top five required soft skills in both occupational categories are the same.

JOBSEEKER TENDENCIES

Customer service, communication, organizational, and interpersonal skills are the most frequently cited skills in resumes. They are the top four skills listed in the top 20 soft skills and comprise over half of the top 20 skills in terms of frequency.

White-collar jobseekers are doing a better job than blue-collar jobseekers in matching hard skills (1.8x better). For soft skills, the data reveals they are more important for blue-collar professions, though white-collar jobseekers have a higher matching rate than blue-collar workers (42 percent).

Jobseekers may be placing an inordinate amount of value on skills such as budgeting, time management, being a team player, and Microsoft Word skills. These rank in the top 20 skill sets mentioned resumes, but do not appear in the top 20 skills noted in job ads.

Job Ad Skills Analysis

Employer Preferences Revealed

Job ads mention an average of 21.8 skills in position descriptions. Surprisingly while employers name hard skills among 11 out of 20 of the most common skills in job ads, employers place higher priority on soft skills, comprising three of the four skills most often listed in job ads. These three soft skills—customer service (13 percent of total top 20 skill occurrences), communication (8.9 percent), and written communication (8.3 percent)—account for 30 percent of the most frequently mentioned top 20 skills.

TOTAL SKILLS LISTED PER JOB AD

OCCUPATION	TOTAL SKILLS LISTED	AVG. SKILLS PER JOB AD	AVG. HARD SKILLS PER JOB AD	AVG. SOFT SKILLS PER JOB AD
AVERAGE	210	21.8	16.7	5.2
Caregivers	54	10	9	1
Accountants	210	22	18	4
Sales Associates	176	23	16	7
Registered Nurses	218	17	15	2
Servers	179	15	12	3
Bartenders	81	11	8	3
Administrative Assistants	248	30	22	8
Customer Service Representatives	257	24	15	9
Software Developers	474	51	43	8
Cashiers	158	22	16	6
Teachers	123	12	8	4
Store Managers	198	25	18	7

Further, four of the top six most-mentioned skills across the 12 occupational areas analyzed are soft skills, with communication skills present in all 12. Interestingly, in addition to topping the skills list in terms of frequency, customer service also appears in 11 of the 12 occupational types, a likely indicator that employers expect roles traditionally separated from customer service—such as accountants, teachers, and registered nurses—to make it a focus in those careers today. For these employers, every job is a customer service job in some way or another.

The importance soft skills play across the occupational types corroborates research conducted by Harvard University, the Carnegie Foundation, and Stanford Research Center. It found that 85 percent of job success is related to well-developed soft skills, whereas only 15 percent come from hard skills.⁴

TOP 20 JOB AD SKILLS IN TERMS OF FREQUENCY AND OCCUPATION PRESENCE

RANK	SKILL (FREQUENCY)	OCCUPATION PRESENCE
1	Customer Service (13% of Top 20 Skills)	11 (Out of 12 Career Types)
2	Communication Skills (8.9% of Top 20 Skills)	12
3	Scheduling *	11
4	Written Communication (8.3% of Top 20 Skills)	9
5	Microsoft Excel *	-
6	Problem Solving	9
7	Organizational Skills	11
8	Physical Demand *	10
9	Sales *	-
10	Teamwork	11
11	Collaboration	11
12	English *	10
13	Multi-tasking	9
14	Research *	-
15	Microsoft Office *	-
16	Cleaning *	8
17	Leadership	-
18	Planning *	8
19	Selling *	-
20	Cash Handling *	-

Asterisk = Hard Skill

Hyphen = A skill that appears in the top 20 most frequently mentioned skills but that does not appear in the top 20 skills based on occupational presence.

Job Ad Insights

Hard vs. Soft Skills

The total number of unique hard skills mentioned in job ads across all occupations tallies 3.2x more than the total number of soft skills (Total Skills Listed Per Job Ad Table, pg. 8).

And while job ads in all categories mention hard skills more frequently than soft skills, soft skills tend to have higher priority in defining employer preferences. The takeaway here is that while hard skills still dominate the bulk of job ad copy, job ad writers should not overlook the importance of soft skills as a success factor in all job categories. Likewise, jobseekers need to pay close attention to what soft skills are included in their resumes, as employers pay close attention to the specific soft skills they include.

AVERAGE NUMBER OF HARD AND SOFT SKILLS

16.7 vs 5.2

An average of 16.7 hard skills (mean) are found in job ads versus an average of 5.2 soft skills— or a ratio of 3.2x more.

When hard and soft skills are analyzed between white collar and blue collar job ads, data shows a lower hard-to-soft skills ratio in white collar job ads as compared to the overall average (2.1x compared to 3.2x) and a higher hard-to-soft skills ratio in blue collar professions as compared to the overall average (4x).⁵

SKILLS IN WHITE COLLAR VS. BLUE COLLAR JOB ADS

200% White collar job ads list **200 percent more soft skills** compared to blue collar job ads

2.1X White collar jobs list **2.1x more hard skills than soft skills**, while blue collar jobs list **4x more hard skills than soft skills** (compared to aggregate average of 3.2x more hard skills vs. soft skills)

90% White collar job ads list **90 percent more hard skills** compared to blue collar job ads

Job Ad Insights:

Tech-Centric vs Soft-Centric

A more meaningful insight emerges in the comparison of tech-centric and soft-centric job ads.⁶ Namely, employers seek a higher ratio of hard skills for tech-centric jobs and a higher ratio of soft skills for soft-centric careers. Tech-centric job ads seek candidates with 50 percent more hard skills in comparison to soft-centric jobs. The opposite is true for soft skills, which appear 50 percent more often in soft-centric job ads versus tech-centric job ads.

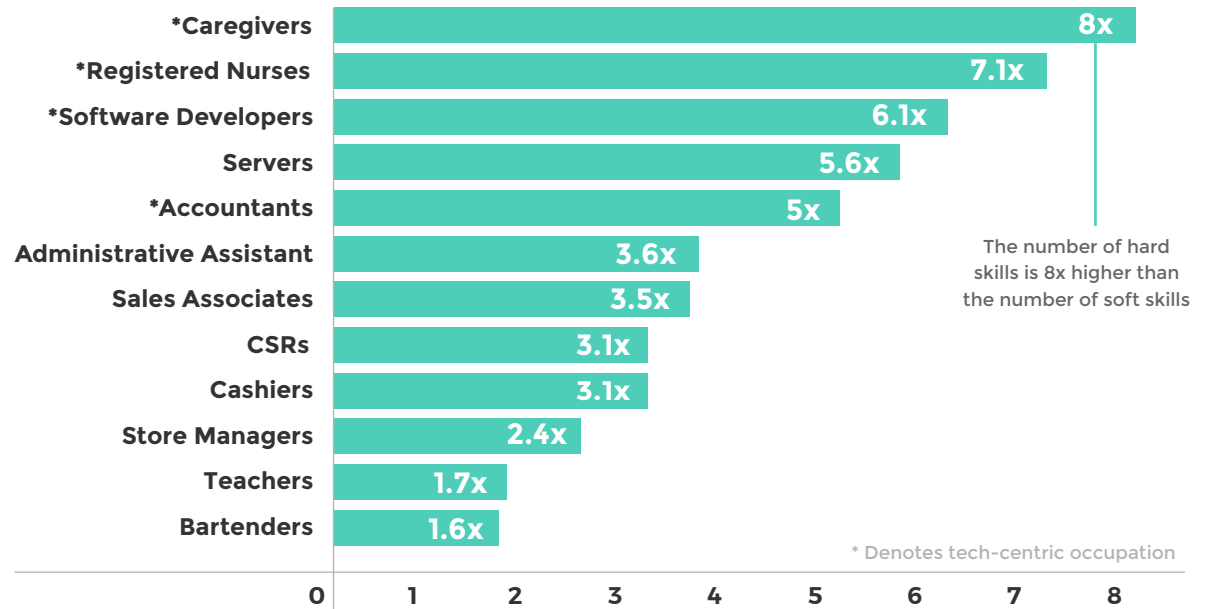


TECH-CENTRIC OCCUPATIONS are those where the majority of requisite skills are specific to that particular occupation or industry and often require formal training and certification. Four of the 12 occupations in our study are classified as tech-centric: accountants, caregivers, registered nurses, and software developers.



SOFT-CENTRIC OCCUPATIONS are those where the majority of requisite skills are shared across occupations and not taught in formal training programs. Eight of the 12 occupations in our study are classified as soft-centric: administrative assistants, bartenders, cashiers, customer service representatives, sales associates, (food and beverage) servers, store managers, and teachers.

RATIO OF HARD SKILLS TO SOFT SKILLS IN JOB ADS



Not surprisingly, tech-centric roles—caregivers, registered nurses, software developers, and accountants—where some form of higher education is required have a higher ratio of hard skills versus soft skills (Ratio of Hard Skills to Soft Skills in Job Ads Table, pg. 11). In contrast to the average across all 12 occupations, these four tech-centric roles claim over 5x the number of hard-to-soft skills (as compared to the average of 3.2x).

At the same time, customer (or people)-facing roles such as customer service representatives, cashiers, store managers, teachers, and bartenders have the smallest disparity between hard and soft skills (Ratio of Hard Skills to Soft Skills in Job Ads Table, pg. 11). This makes a lot of sense, as soft skills play a critical role in the success—or failure—of these occupations.

Comparison of soft skills across tech-centric and soft-centric occupations yields some interesting insights. One immediate takeaway is that 15 of the 20 soft skills are common between the two types of occupational groups. A second takeaway is that three of the top five soft skills in both lists are the same (communication skills, written communication skills, and problem solving).

TOP 20 JOB AD SOFT SKILLS TECH-CENTRIC VS. SOFT-CENTRIC OCCUPATIONS

RANK	TECH-CENTRIC OCCUPATIONS	SOFT-CENTRIC OCCUPATIONS
1	Communication Skills	Customer Service
2	Written Communication	Communication Skills
3	Problem Solving	Written Communication
4	Troubleshooting	Organizational Skills
5	Detail Oriented	Problem Solving
6	Organizational Skills	Multi-tasking
7	Collaboration	Teamwork
8	Multi-tasking	Positive Attitude
9	Verbal Communication	Collaboration
10	Creativity	Interpersonal Skills
11	Teamwork	Time Management
12	Customer Service	Leadership
13	Leadership	Customer Contact
14	Organized	Detail Oriented
15	Meeting Deadlines	Building Effective Relationships
16	Project Management	Verbal and Written Communication
17	Interpersonal Skills	Organized
18	Analytical Skills	Verbal Communication
19	Building Effective Relationships	Creativity
20	Deadline Driven	Listening

Skills from the top 20 tech-centric soft skills that are not found on the soft-centric list include:

- **Troubleshooting (#4)**
- **Meeting deadlines (#15)**
- **Project management (#16)**
- **Analytical skills (#18)**
- **Deadline driven (#20)**

Soft skills from the top 20 postings in soft-centric occupational ads not in the top 20 tech-centric soft skills include:

- **Positive attitude (#8)**
- **Time management (#11)**
- **Customer contact (#13)**
- **Verbal and written communication (#16)**
- **Listening (#20)**

A quick comparison of these two lists shows that the skills included in job ads for tech-centric occupations, which aren't found in job ads for soft-centric occupations, are task focused, whereas those skills found in the soft-centric occupational roles are relationship focused.



TECH-CENTRIC JOB ADS CONTAIN
50 PERCENT MORE HARD SKILLS
COMPARED TO SOFT-CENTRIC JOBS



SOFT-CENTRIC JOB ADS CONTAIN
50 PERCENT MORE SOFT SKILLS
COMPARED TO TECH-CENTRIC JOBS



SOFT-CENTRIC JOB ADS LIST
1.3X MORE HARD SKILLS THAN
SOFT SKILLS

WHILE TECH-CENTRIC JOB ADS LIST
4.25X MORE HARD SKILLS THAN
SOFT SKILLS

Other aspects of the data confirm this insight. For example, though customer service and interpersonal skills appear in the top 20 soft skills for tech-centric occupations, they appear substantially lower on the tech-centric list (#1 to #12 and #10 to #17, respectively). Employers seek jobseekers with a positive attitude for soft-centric roles, but that same soft skill is not a priority for tech-centric roles (#8 for soft-centric roles but not in the top 20 for tech-centric occupations).

Data for hard skill comparison between tech- and soft-centric occupations reveals a substantial divide. Only a handful of hard skills are shared across the two occupational groupings (scheduling, Microsoft Excel, budgeting, and English). Most of the skills in tech-centric occupations that are not found in soft-centric job ads coincide with specific digital skill requirements such as XML, Java, Python, .NET, JavaScript, and Node.js for Software Developers.

Basic mathematics makes the soft-centric hard skill list at #9. This finding corresponds with industry research that shows a deficiency of math and communication skills in the workforce (viz., written communication and verbal and written communication skills are #2 and #16 on the soft skill list for soft-centric occupations). At the same time, the skills that top the hard and soft skill lists for soft-centric occupations—customer service (soft skills) and sales (hard skills), respectively—align with the fact that business outcomes in these fields rely heavily on customer-facing interactions.

TOP 20 JOB AD HARD SKILLS TECH-CENTRIC VS. SOFT-CENTRIC OCCUPATIONS

RANK	TECH-CENTRIC OCCUPATIONS	SOFT-CENTRIC OCCUPATIONS
1	Scheduling	Sales
2	Caregiving	Retail Industry Knowledge
3	Software Development	Physical Demand
4	Running Errands	Bartending
5	Microsoft Excel	Microsoft Excel
6	Accounting	Store Management
7	Care Planning	Scheduling
8	Research	Teaching
9	Month End Close	Basic Mathematics
10	XML	Microsoft Office
11	CPR	English
12	Java	Administrative Support
13	Python	Cash Handling
14	Quality Assurance and Control	Cleaning
15	.NET	Cash Register Operation
16	Budgeting	Microsoft Word
17	English	Microsoft PowerPoint
18	General Ledger Account Reconciliation	Customer Checkout
19	JavaScript	Administrative Assistant
20	Node.js	Budgeting

Resume Skills Analysis

Jobseeker Perceived Preferences

Jobseekers' resumes list an average of 13 skills, with an average of 9.8 hard skills listed per resume compared to 3.2 soft skills. The range of soft skills across occupations is also smaller (1.5 listed for caregiver role to 5 listed for customer service representative positions) than the range for hard skills (3.1 for caregiver resumes versus 34.6 hard skills for software developer resumes).

TOTAL SKILLS LISTED

OCCUPATION	AVG. SKILLS LISTED	AVG. HARD SKILLS	AVG. SOFT SKILLS
Average	13	9.8	3.2
Administrative Assistant	15.9	11.2	4.4
Cashier	7.8	4.7	3.1
Caregiver	4.6	3.1	1.5
Customer Service Rep	12.2	7.2	5.0
Bartender	7.8	4.4	3.4
Server	6.5	4.2	2.3
Sales Associate	9.3	5.7	3.6
Store Manager	12.9	8.4	4.5
Teacher	8.3	5.3	3.0
Registered Nurse	14	12.4	1.6
Accountant	18.1	15.9	2.2
Software Developer	38.5	34.6	3.9

Resume Insights:

Hard vs. Soft Skills

The top four soft skills jobseekers include in their resumes are⁷:

- **Customer service**
- **Communication skills**
- **Organized**
- **Interpersonal skills**

The skills listed above comprise more than half of the top 20 skills in terms of frequency.

Similar to job ads, 11 of 12 occupational categories include customer service as an important skill. (The same is true for communication skills, organizational skills, and collaboration.) Jobseekers in 10 of 12 occupations also cite organized and written communication as top soft skills.

TOP 20 SOFT SKILLS IN RESUMES

FREQUENCY RANK	SOFT SKILLS	NUMBER OF OCCUPATIONS* WHERE SKILL APPEARS
1	Customer Service (22% of Top 20 Skills)	11
2	Communication Skills (13% of Top 20 Skills)	11
3	Organized (8% of Top 20 Skills)	10
4	Interpersonal Skills (7.5% Top 20 Skills)	8
5	Organizational Skills	11
6	Problem Solving	9
7	Leadership	7
8	Team Player	6
9	Time Management	-
10	Written Communication	10
11	Building Effective Relationships	5
12	Energetic	6
13	Creativity	-
14	Positive Attitude	7
15	Multi-tasking	9
16	Collaboration	11
17	Attention to Detail	-
18	Detail Oriented	6
19	Listening	-
20	Verbal Communication	5

* From 12 Total Occupations

Hyphen = A skill that appears in the top 20 most frequently mentioned skills but that does not appear in the top 20 skills based on occupational presence

TOP 20 HARD SKILLS IN RESUMES

As compared to soft skills, top hard skills appear less frequently and across fewer occupations. Specifically, the frequency soft skills appear in jobseeker resumes (or the total instances a unique skill is repeated across all resumes) is almost twice that for hard skills.

Also, the number of occupations where top hard skills appear are fewer than the number of occupations that call for the top soft skills. Sales, Microsoft Excel, and Microsoft Office garner almost one-third of the top 20 hard skills in frequency, yet they only appear in 7, 5, and 6 of the occupations respectively. Scheduling and English top the list, appearing in 11 and 10 of the 12 occupations analyzed, respectively.

The frequency of soft skills is 87 percent greater than the frequency for hard skills in resumes.

FREQUENCY RANK	HARD SKILLS	NUMBER OF OCCUPATIONS* WHERE SKILL APPEARS
1	Sales (13% of Top 20 Hard Skills)	7
2	Microsoft Excel (10% of Top 20 Hard Skills)	5
3	Microsoft Office (9% of Top 20 Hard Skills)	6
4	English	10
5	Budgeting	6
6	Scheduling	11
7	Cleaning	8
8	Bartending	-
9	Payment	-
10	Microsoft Word	5
11	Retail Industry Knowledge	-
12	Merchandising	-
13	Nursing	-
14	Caregiving	-
15	Research	6
16	Staff Management	-
17	SQL	-
18	Accounting	-
19	Teaching	-
20	.NET	-

* From 12 Total Occupations

Hyphen = A skill that appears in the top 20 most frequently mentioned skills but that does not appear in the top 20 skills based on occupational presence

Resume Insights:

Tech-Centric and Soft-Centric Occupations

Comparison of hard skills between tech-centric and soft-centric occupations shows substantial differences in the skills that jobseekers include in their resumes. For example, half of the top 20 tech-centric hard skills are formally taught skills (e.g., Nursing, SQL, .NET, English), whereas only three of those in the soft-centric list require formal training and/or coursework. Most of the others in the soft-centric list are learned skills (e.g., bartending, cleaning, appointing setting, etc.).

Tech-centric occupations exhibit a higher ratio of hard skills to soft skills than soft-centric positions (How Well Jobseekers Are Matching Diversity of Total Unique Skills in All Job Ads, pg. 23). Software developer resumes (34.6 on average) have more than twice the number of hard skills as the next closest occupation. Other tech-centric occupations with a higher number of hard skills include accountants

TOP 20 RESUME HARD SKILLS IN TECH-CENTRIC VS. SOFT CENTRIC OCCUPATION

RANK	TECH-CENTRIC OCCUPATIONS	SOFT-CENTRIC OCCUPATIONS
1	Nursing	Sales
2	Caregiving	Microsoft Excel
3	Microsoft Excel	Microsoft Office
4	SQL	Bartending
5	Budgeting	Cleaning
6	.NET	English
7	Accounting	Retail Industry Knowledge
8	English	Merchandising
9	C (Programming Language)	Scheduling
10	Product	Budgeting
11	Accounts	Appointment Setting
12	Procedural Language	Microsoft Word
13	Software	Planning
14	IP	Administrative Assistant
15	Software Development	Store Manager
16	Microsoft Office	Teaching
17	Payment	Payment
18	Scheduling	Lesson Planning
19	Patient Care	Marketing
20	Invoicing	Cash Handling

(15.9), registered nurses (12.4), and administrative assistants (11.2).

Jobseekers in tech-centric and soft-centric occupations include some of the same top soft skills—communication skills, customer service, interpersonal skills. Yet, there are significant differences between the tech-centric and soft-centric lists.

For example, tech-centric jobseekers include quality management (#8), troubleshooting (#9), project management (#14), and listening (#20)—skills that do not appear in the top 20 list of soft skills for soft-centric jobseekers. Soft-centric job seekers spell out skills such as time management (#7), building effective relationships (#9), and positive attitude (#14)—skills that aren't in the top 20 soft skills for tech-centric jobseekers.

TOP 20 RESUME SOFT SKILLS IN TECH-CENTRIC VS. SOFT CENTRIC OCCUPATION

RANK	TECH-CENTRIC OCCUPATIONS	SOFT-CENTRIC OCCUPATIONS
1	Communication Skills	Customer Service
2	Customer Service	Communication Skills
3	Interpersonal Skills	Organized
4	Organized	Interpersonal Skills
5	Written Communication	Organizational Skills
6	Problem Solving	Leadership
7	Quality Management	Time Management
8	Troubleshooting	Problem Solving
9	Team Player	Building Effective Relationships
10	Detail Oriented	Team Player
11	Collaboration	Written Communication
12	Organization Skills	Energetic
13	Attention to Detail	Creativity
14	Project Management	Positive Attitude
15	Energetic	Multi-tasking
16	Teamwork	Listening
17	Leadership	Detail-Oriented
18	Verbal Communication	Attention to Detail
19	Listening	Verbal Communication
20	Creativity	Collaboration

Job Ad and Resume Comparison

Prioritization of Skills

Job ads list an average of 21.8 skills, whereas resumes contain an average of 13 skills. To compare the top 20 skills in job ads and those matched in resumes based on both frequency and number of occurrences across the 12 occupations, we developed an algorithm that combines both into one score.

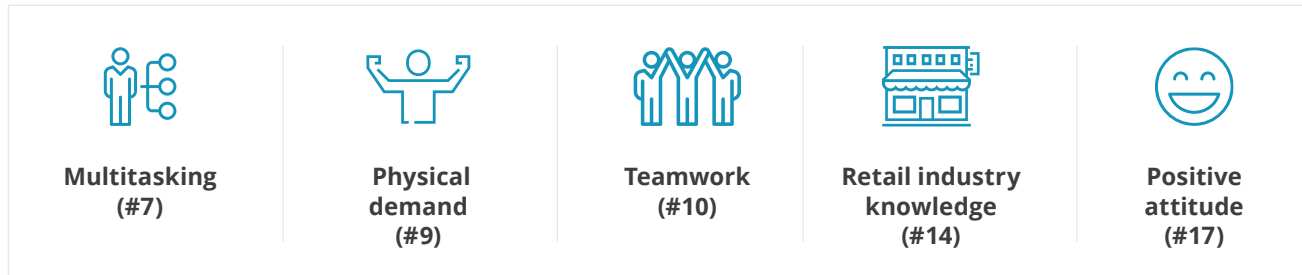
For skills in general (viz., both hard and soft skills), jobseekers match only 60 percent of the skills listed in job ads. One insight that immediately emerges is that both job ads and resumes place a high priority on customer service (#1 on both lists) and communication skills (#2 on both lists). Experience with both Microsoft Office and Microsoft Excel also appear in both job ad and resume top 20 skill lists.

TOP 20 JOB SKILLS PER FREQUENCY AND NUMBER OF OCCUPATIONAL OCCURRENCES: JOB ADS VS. RESUMES

RANK	JOB ADS	RESUMES
1	Customer Service, 15% (of Total Top 20 Skills Score)	Customer Service, 19% (of Total Top 20 Skills Score)
2	Communication Skills, 12%	Communication Skills, 11%
3	Scheduling, 8%	Sales, 8%
4	Written Communication, 8%	Organized, 6%
5	Organizational Skills, 7%	English, 6%
6	Problem Solving, 7%	Scheduling, 5%
7	Multi-Tasking, 5%	Interpersonal Skills, 5%
8	Sales, 5%	Microsoft Office, 5%
9	Physical Demand, 4%	Microsoft Excel, 4%
10	Teamwork, 4%	Organizational Skills, 4%
11	Collaboration, 4%	Cleaning, 4%
12	English, 4%	Budgeting, 3%
13	Microsoft Excel, 3%	Problem Solving, 3%
14	Retail Industry Knowledge, 3%	Written Communication, 3%
15	Interpersonal Skills, 3%	Leadership, 2%
16	Microsoft Office, 2%	Time Management, 2%
17	Positive Attitude, 2%	Research, 2%
18	Leadership, 2%	Team Player, 2%
19	Cleaning, 2%	Microsoft Word, 2%
20	Research, 2%	Collaboration, 2%

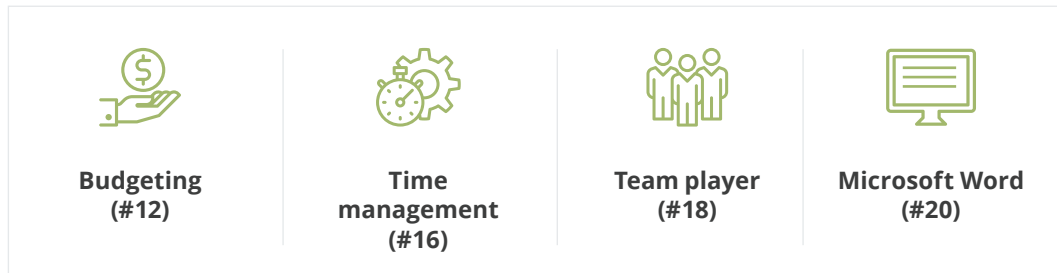
However, there are some interesting divergences between the lists.

Skills that frequently appear in job ads but that don't appear in the top 20 resume skills include:



Here, jobseekers would do well to include these five skills on their resumes if they feel they can legitimately claim them and they are occupationally relevant.

Resumes also include skills not found in the top 20 skills listed in job ads:



The takeaway is that these four skills may not be as valuable to employers as they are to jobseekers. Further, employers need to pay close attention to what Microsoft skills are requested, while jobseekers need to ensure they have these covered in their resumes (e.g., Microsoft Word vs. Microsoft Excel vs. Microsoft Office).

Hard and Soft Skills Commonalities: Job Ads vs. Resumes

Just as resumes contain far fewer total skills than job ads, they also count far fewer hard and soft skills than job ads. Job ads list an average of 16.7 hard skills per job ad, whereas resumes list 9.8 hard skills. The same is true for soft skills: job ads list an average of 5.2 soft skills, while resumes list 3.2 on average.

Similarly, there is not much deviation from the total skills matched ratio at the hard-and-soft skill levels: jobseekers match 59 percent of hard skills in job ads and 62 percent of soft skills in job ads. The takeaway from these is that jobseekers may need to work harder to include skills in their resumes that align with the skills listed in job ads.

41%

Job ads contain an average of 41 percent more **hard skills** than resumes

38%

Job ads contain an average of 38 percent more **soft skills** than resumes

59%

Jobseekers' resumes only match 59 percent of the **hard skills** in job ads

62%

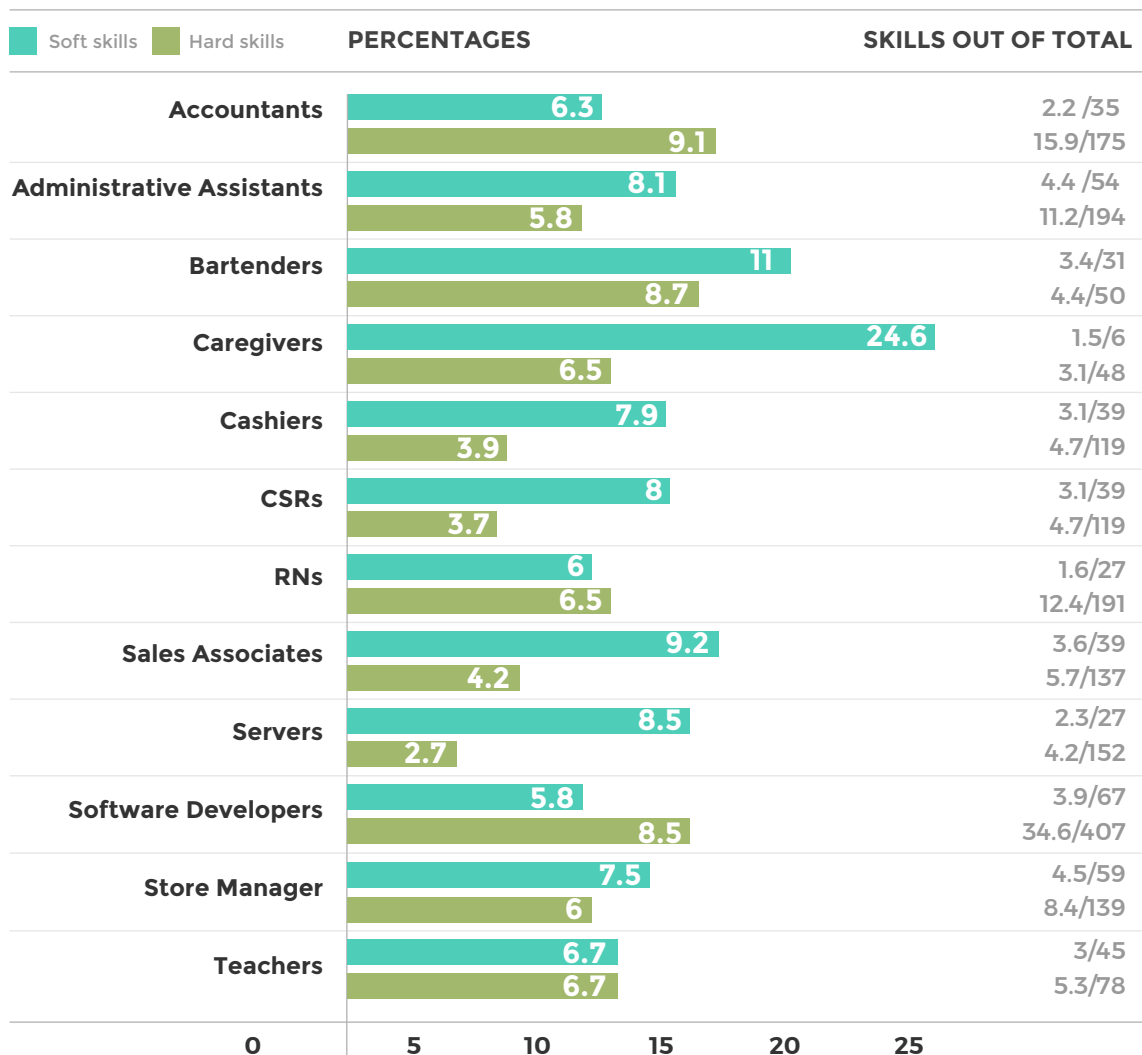
Jobseekers' resumes only match 62 percent of the **soft skills** in job ads

There are two occupations where jobseekers match a higher percentage of hard skills than soft skills in job ads in their resumes. Software developer resumes align, on average, with 8.5 percent of the hard skills in job ads. Accountant resumes do even better, aligning with 9.1 percent of hard skills listed in job ads.

Hard skills in job ads and resumes that are most commonly repeated across occupations include (Hard Skills That are Common to Both Job Ads and Resumes, pg.32):

- **Budgeting**
(found in 5 occupations)
- **English (5)**
- **Sales (5)**
- **Scheduling (5)**
- **Cash handling (4)**
- **Microsoft Office (4)**
- **Basic mathematics (3)**
- **Cleaning (3)**
- **CPR (3)**
- **Microsoft Excel (3)**
- **Planning (3)**
- **Retail industry knowledge (3)**

HOW WELL JOBSEEKERS ARE MATCHING DIVERSITY OF TOTAL UNIQUE SKILLS IN ALL JOB ADS



Caregivers, servers, and store managers are doing the best in terms of crafting their resumes to match hard skills listed in job ads, matching 13 of the top 20 hard skills found in job ads in each occupational instance. Likewise, cashiers are doing the worst, matching only 8 of the top 20 hard skills (Jobseeker Top Resume Skills Compared to Top Job Ad Skills: Hard and Soft Skills, pg. 31).

Soft skills in job ads and resumes most commonly repeated across occupations include:

- **Customer service**
- **Communication skills**
- **Interpersonal skills**
- **Organizational skills**
- **Written communication**

Caregivers and teachers are doing better than other occupations by matching the most top five soft skills found in job ads in their resumes (five out of top five and four out of top five, respectively) (Jobseeker Top Resume Skills Compared To Top Job Ad skills, pg. 31). Servers are doing the worst job, matching only one of out five top soft skills listed in job ads.

Occupations where resumes align the best to the hard skills that employers request vis-à-vis job ads include accountants (9.1 percent), bartenders (11 percent), and software developers (8.5 percent) (How Well Jobseekers are Matching Diversity of Total Unique Skills in Job Ads, pg. 23).

For soft skills, resumes for administrative assistants (8.1 percent), bartenders (8.7 percent), and sales associates (9.2 percent) have the highest alignment with job ads (How Well Jobseekers are Matching Diversity of Total Unique Skills in Job Ads, pg. 23).

TOP 5 SOFT SKILLS THAT OCCUR IN 2 OR MORE OCCUPATIONS ACROSS JOB ADS & RESUMES

Communication Skills	Accountants
	Administrative Assistants
	Bartenders
	aregivers
	Cashiers
	Customer Service Representatives
	Registered Nurses
	Sales Associates
Customer Service	Store Mangers
	Teachers
	Accountants
	Bartenders
	Cashiers
	Customer Service Representatives
	Registered Nurses
	Sales Associates
Interpersonal Skills	Servers
	Store Managers
	Accountants
Organizational Skills	Administrative Assistants
	Sales Associates
	Accountants
Written Communication	Teachers
	Software Developers

Blue Collar vs. White Collar, Tech-Centric vs. Soft-Centric

On the whole, white-collar jobseekers are doing a better job in matching skills listed in job ads as compared to blue-collar jobseekers. When it comes to hard skills, white-collar jobseekers match the skills in job ads 184 percent more often than blue-collar jobseekers. As for soft skills, the gap is much smaller; the ratio of skill matches in white collar resumes is only 42 percent higher than blue-collar resumes.

This serves as an indication that soft skills have a higher value for blue-collar professions versus white collar occupations. Likewise, hard skills have a higher value for white-collar roles.

Comparable findings are evident for tech-centric and soft-centric occupations. The number of resume-to-job ad soft skill matches in soft-centric occupations is 68 percent greater than the number of those for tech-centric occupations. Likewise, hard skill matches in tech-centric jobs are 140 percent more than the number in soft-centric occupations.

BLUE-COLLAR AND WHITE COLLAR RESUME SKILL MATCHES

42%

The number of resume-to-job ad soft skill matches in white collar professions is 42 percent higher than the number of blue collar matches.

184%

The number of resume-to-job ad hard skill matches in white collar professions is 184 percent more than the number of hard skill matches in blue collar resumes.

TECH- AND SOFT-CENTRIC RESUME SKILL MATCHES

68%

The number of resume-to-job ad soft skill matches in soft-centric professions is 68 percent more than the number of soft skills matches in tech-centric job ads.

Biggest Employer-Jobseeker Skill Gaps

Just as there are areas of agreement between employers and jobseekers, there are areas of disparity as well.

For example, jobseekers in certain occupations include specific skills in their resume that don't appear in equal measure in job ads. Specifically, cleaning is found in the top 20 resume hard skills but is not found in the top 20 job ad hard skills for four occupations: caregivers, customer service representatives, sales associates, and store managers (Top 20 Resume Hard Skills NOT Found in Top 20 Job Ad Hard Skills Per Occupation, pg. 34). Other areas of notable divergence include:



English

In the top 20 resume hard skills for accountants, sales associates, software developers, and store managers but not found in the top 20 job ad hard skills for those same occupations.



Cooking

In the top 20 resume hard skills for caregivers, cashiers, and servers but not found in the top 20 job ad hard skills for those same occupations.



Marketing

In the top 20 resume hard skills for administrative assistants, customer service representatives, and sales associates but not found in the top 20 job ad hard skills for those same occupations.



Scheduling

In the top 20 resume hard skills for cashiers, sales associates, and teachers but not found in the top 20 job ad hard skills for those same occupations.

In these occupational instances, jobseekers should look to include top 20 job ad hard skills that are missing from their resumes (e.g., food delivery, physical demand, and other skills are in the top 20 job ad skills that are not matched in the top 20 resume hard skills) (Top Hard Skills in Job Ads NOT in Resumes Per Occupation, pg. 35).

Jobseekers also include soft skills in their resumes that are not found in the top five job ad soft skills in certain occupations (Top 5 Soft Skills in Resumes NOT Found in Top 5 Job Ad Soft Skills per Occupation, pg. 37). “Organized” is found in the top five resume soft skills but not in the corresponding top five job ad soft skills in seven occupations: administrative assistants, bartenders, cashiers, customer service representatives, registered nurses, sales associates, and store managers. Other instances of deviation include:



Customer Service

In the top five resume soft skills for accountants, administrative assistants, software developer, and teachers but not found in the top five job ad soft skills for those same occupations.



Team Player

In the top five resume soft skills for cashiers, customer service representatives, registered nurses, and servers but not found in the top five job ad soft skills for those same occupations.



Interpersonal Skills

In the top five resume soft skills for accountants, bartenders, cashiers, and registered nurses but not found in the top five job ad soft skills for those same occupations.



Building Effective Relationships

In the top five resume soft skills for servers and store managers but not found in the top five job ad soft skills for those same occupations.

One may note that some of these rank in the top 20 of top soft skills listed. However, this is at an aggregate level. When these skills are examined at the 12 individual occupational levels, comparison of top skills in job ads versus resumes evinces certain occupational segments where misalignment exists. For example, in the seven occupations where “organized” appears in the top five soft skills but not in the top five job ad soft skills, the data point indicates that jobseekers overestimate the importance that employers place on being “organized.” Other instances where jobseekers overrate soft skills in specific occupational areas include customer service (4), interpersonal skills (4), team player (4), and building effective relationships (2).

Overall, the ratio of hard-to-soft skills in job ads (3.2x greater) and resumes (3x greater) is almost the same. Comparing job ads to resumes, there is little variation in the hard-to-soft skill ratio across occupations (How Well Jobseekers are Matching Diversity of Total Unique Skills in All Job Ads, pg. 23). The two occupations with the biggest deviation are accountants and servers. For accountants, resumes have a 7.2 hard-to-soft skill ratio, whereas job ads have only a 4.5 hard-to-soft skill ratio. For servers, job ads have a 1.8 hard-to-soft skills ratio versus a 4 hard-to-soft skills ratio for job ads. Employers and jobseekers have the farthest distance to travel in closing the skills gap in these two instances.

Sometimes, the absence of a word in the resume top 20 skill list or job ad top 20 skill list is a matter of semantics. For example, consider the use of the phrase “oral communications” versus “verbal communications.” Job ad writers tend to use the term “oral communications” rather than the term “verbal communications” (found in the resume top 20). Resume writers should switch to using the phrase “oral communications” in their resumes to get noticed. Another example of how semantics might affect these findings can be found in the use of the word “organized” in resumes versus the use of the phrase “organizational skills” in job ads. In this instance, resume rewriters should begin using “organizational skills” versus “organized” to get noticed.

Concluding Thoughts:

Bridging the Gap Between Job Ads and Resumes

Much research has been conducted to analyze the causes of the skills gap between employers and jobseekers and to determine what can be done to help close it. Our analysis of the skills employers list in job ads and those matched by jobseekers provides fodder for the skills-gap conversation. The following are some considerations:

- **Employers that rely on automated skills matching are not going to find enough qualified candidates** (with a 60 percent average match ratio). They need to carefully consider what hard and soft skills are most critical and make sure those are called out explicitly in the job ad.
- **Jobseekers need to do a better job of matching skills in their resumes to those included in job ads** (assuming they possess those skills). Jobseekers in blue-collar industries have the most work to do in this area, as the gap is the biggest for them.
- **For soft skills that occur across all occupations, jobseekers must find better ways to articulate those in their resumes** (and, subsequently, in job interviews). Some of these skills, like customer service, may not be perceived as important by some jobseekers where such soft skills previously were not seen as critical.
- **Jobseekers need to heed hard skills listed by employers that they do not possess and seek educational and career development opportunities so that they can add them to their resumes.** At the same time, employers should create programs, such as formal training and informal coaching and development, that give employees the opportunity to gain new hard skills that employers currently value.

TABLES

JOBSEEKER TOP RESUME SKILLS COMPARED TO TOP JOB AD SKILLS: HARD AND SOFT SKILLS

TOP 20 JOB AD HARD SKILLS FOUND IN RESUME TOP 20 HARD SKILLS PER OCCUPATION	TOP 5 JOB AD SOFT SKILLS FOUND IN TOP 5 RESUME SOFT SKILLS PER OCCUPATION
13 Caregivers	5 Caregivers
13 Servers	4 Teachers
13 Store Managers	3 Accountants
12 Administrative Assistants	3 Sales Associates
12 Bartenders	3 Software Developers
11 Accountants	3 Sales Manager
11 Teachers	2 Administrative Assistants)
10 Customer Service Representatives	2 Bartenders
9 Registered Nurses	2 Cashiers
9 Sales Associates	2 Customer Service Representatives
8 Software Developers	2 Registered Nurses
7 Cashiers	1 Servers

HARD SKILLS COMMON TO BOTH JOB ADS AND RESUME

TOP 20 HARD SKILLS LISTS THAT OCCUR IN 2 OR MORE OCCUPATIONS

Budgeting	Accountants	Microsoft Office	Accountants
	Administrative Assistants		Administrative Assistants
	Sales Associates		Customer Service Representatives
	Store Managers		Teachers
	Teachers		
English	Cashiers	Basic Mathematics	Bartenders
	Customer Service Representatives		Cashiers
	Registered Nurses	Servers	
	Servers	Cleaning	Bartenders
	Teachers		Cashiers
Sales	Bartenders	Servers	
	Customer Service Representatives	CPR	Registered Nurses
	Sales Associates		Servers
	Servers	Teachers	
	Store Managers	Microsoft Excel	Accountants
Scheduling	Administrative Assistants		Administrative Assistants
	Caregivers		Customer Service Representatives
	Customer Service Representatives	Microsoft Word	Accountants
	Servers		Administrative Assistants
	Store Managers		Customer Service Representatives
Cash Handling	Bartenders	Planning	Bartenders
	Cashiers		Servers
	Sales Associates	Store Managers	
	Servers	Retail Industry Knowledge	Cashiers
			Customer Service Representatives
	Store Managers		

TOP 5 SOFT SKILLS THAT OCCUR IN 2 OR MORE OCCUPATIONS ACROSS JOB ADS & RESUMES

Communication Skills	Accountants
	Administrative Assistants
	Bartenders
	Caregivers
	Cashiers
	Customer Service Representatives
	Registered Nurses
	Sales Associates
	Store Managers
	Teachers
Customer Service	Accountants
	Bartenders
	Cashiers
	Customer Service Representatives
	Registered Nurses
	Sales Associates
	Servers
	Store Managers
Interpersonal Skills	Accountants
	Administrative Assistants
	Sales Associates
Organizational Skills	Accountants
	Teachers
Written Communication	Software Developers
	Teachers

TOP 20 RESUME HARD SKILLS NOT FOUND IN TOP 20 JOB AD HARD SKILLS PER OCCUPATION

Cleaning	Caregivers	Customer Service	Bartenders
	Customer Service Representatives		Servers
	Sales Associates		
	Store Managers		
English	Accountants	Microsoft Excel	Cashiers
	Sales Associates		Storage Managers
	Software Developers	Microsoft Office	Sales Associates
	Store Managers		Storage Managers
Cooking	Caregivers	Nursing	Caregivers
	Cashiers		Registered Nurses
	Servers	Performance	Servers
	Software Developers		
Marketing	Administrative Assistants	Planning	Customer Service Representatives
	Customer Service Representatives		Sales Associates
	Sales Associates	Research	Sales Associates
	Teachers		
Scheduling	Cashiers	Returns	Cashiers
	Sales Associates		Sales Associates
	Teachers	Teaching	Registered Nurses
	Sales Associates		

TOP HARD SKILLS IN JOB ADS NOT IN RESUMES PER OCCUPATION

Accountant	Month End Close	Cashiers	Food Service
	General Ledger Acct Reconciliation		Work Area Maintenance
	Account Reconciliation		Lift
	Financial Analysis		Physical Demand
	GAAP		Processing Item Returns
	Microsoft PowerPoint		HACCP
	Computer Literacy		Retail Operations
	Corporate Accounting		Point of Sale Systems
	Writing		Sales Management
Administrative Assistant	Microsoft PowerPoint	Receiving Checks and Security Deposits	
	Microsoft Outlook	Refunds, Exchanges, and Adjustments	
	Word Processing	Training Programs	
	Travel Arrangements	Calculator	
	Secretarial Skills	Customer Service Representatives	
	Bilingual		Computer Skills
	Prepare Presentations		Bilingual
	Spanish	Quality Assurance and Control	
Bartenders	Physical Demand	Customer Billing	
	Customer Checkout	Microsoft Windows	
	Food Service Experience	Presentation Skills	
	Hazard Analysis Critical Control	Product Sales	
	Training Programs	Spanish	
	Work Area Maintenance	Cash Deposits and Receipts	
	Food Delivery	Cash Handling	
Retail Industry Knowledge			
Caregivers	Atrial		
	ADHD		
	Medical Reminders		
	Training Programs		
	ADLS Assistance		
	Memoranda Preparation		
	Memos		

TOP HARD SKILLS IN JOB ADS NOT IN RESUMES PER OCCUPATION (CONT.)

Registered Nurses	Long-Term Care
	Medical Records Documentation
	Blood Pressure Measurement
	BMI
	Caregiving
	Discharge Planning
	Flu Vaccination
	Home Health Care
	Nurse Management
	Patient/Family
Sales Associates	Education and Instructure
	Phlebotomy
	Basic Mathematics
	Calculations
	Refunds, Exchanges, and Adjustments
	Scanners
	Description and Demonstration of Products
	Product Sales
	Account Management
	Beauty Industry
Servers	Brand Awareness
	Buying Experience
	CAD Software
	Food Delivery
	Physical Demand
	Customer Checkout
	Carry
	Demands
Presentation Skills	
Database Administration	

Software Developers	XML
	Research
	Python
	Node.JS
	Software Engineering
	ASP.NET
	Continuous Integration
	Object-oriented Analysis and Design
	Quality Assurance and Control
	Store Managers
Key Performance Indicators (KPIs)	
Lift	
Onboarding	
Physical Demand	
Teachers	Calculations
	Retail Sales
	Physical Demand
	French
	Computer/Word Processing
	Microsoft Word
	Administrative Functions
	Behavior Analysis
Carry	
Educational Programs	
German	

TOP 5 SOFT SKILLS IN RESUMES NOT FOUND IN TOP 5 JOB AD SOFT SKILLS PER OCCUPATION

Organized	Administrative Assistants
	Bartenders
	Cashiers
	Customer Service Representatives
	Registered Nurses
	Sales Associates
	Store Managers
Customer Service	Accountants
	Administrative Assistants
	Software Developers
	Teachers
Interpersonal Skills	Accountants
	Bartenders
	Cashiers
	Registered Nurses
Team Player	Cashiers
	Customer Service Representatives
	Registered Nurses
	Servers
Building Effective Relationships	Servers
	Store Managers

End Notes

- 1 Andrew Weaver, "The Myth of the Skills Gap," MIT Technology Review, August 25, 2017, <https://www.technologyreview.com/s/608707/the-myth-of-the-skills-gap/>.
- 2 "CEOs Tackle Skills Gap as a National Crisis Threatening America's Economic Future," Business Roundtable, June 2017, <http://businessroundtable.org/skills>.
- 3 This is based on statistics from the Department of Labor, Bureau of Labor Statistics, www.bls.gov/news.release/ocwage.nr0.htm, accessed October 6, 2017.
- 4 "The Soft Skills Disconnect," National Soft Skills Association, February 13, 2015, www.bls.gov/ocsm/commain.htm
- 5 Determination of blue collar and white collar occupational classification is based on U.S. Department of Labor, Bureau of Labor Statistics, "Occupational Classification System Manual," accessed September 30, 2017, <https://www.bls.gov/ocsm/commain.htm>.
- 6 The concept of tech-centric and soft-centric jobs are taken from "The Human Factor: The Hard Time Employers Have Finding Soft Skills," Burning Glass Technologies, November 2015, http://burning-glass.com/wp-content/uploads/Human_Factor_Baseline_Skills_FINAL.pdf.
- 7 For the skills listed in resumes, these are delineated from the total skills matched in job ads.

A study conducted by LiveCareer in conjunction with TIRO communications

For more information about LiveCareer, visit www.livecareer.com



About LiveCareer:

LiveCareer, a subsidiary of BOLD LLC, is the number one resource for jobseekers to find information, guidance, and support for their careers. Since 2005, LiveCareer has helped more than 10 million people globally boost their chances of finding a job in less time. That includes providing jobseekers with resume templates that can help them build stronger resumes and cover letters, as well as providing interview prep tools and original content that can help candidates target their job search and move forward on their chosen career path.



About TIRO Communications:

The award-winning team at TIRO Communications works with fast-growth startups to large enterprises to help them deliver content marketing, customer marketing, and demand-generation programs that listen to the entire orchestra and not simply the individual instruments. This integrated marketing approach enables clients to generate better business outcomes around brand awareness and engagement, increased lead generation and funnel advancement, and revenue growth. TIRO Communications' Cognition Insights technology-enabled service combines numerical and natural language data to produce actionable insights used by marketing, sales, product, and support organizations.

For more information on TIRO Communications, visit **TIROCommunications.com**.