

The Most In-Demand Job Skills in IT & Engineering

Addressing the Tech Skills Shortage

Q4 2022 EDITION

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INDUSTRY REPORT:
**The Most In-Demand Job Skills
in IT & Engineering**

Addressing the Tech Skills Shortage

2022 EDITION | CEIPAL Corp.

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In the fall of 2022, CEIPAL partnered with customers to conduct a study of IT and Engineering jobs they posted. These staffing organizations provided CEIPAL access to more than 85,000 anonymous job postings, which included titles, desired skills, locations, and salaries. This data was collected and analyzed with the aim of providing accurate information on market trends in the IT and Engineering industries for staffing firms, employers, and job seekers alike. CEIPAL will continue updating these findings to provide up-to-date information as the market evolves.

Solutions begin with a need, and the need for skilled talent is a current and pressing concern. As a leading provider of talent acquisition solutions, CEIPAL is uniquely positioned to understand the challenge of finding talent for tech jobs today. The main purpose of this study was to discover the most in-demand skills in IT & Engineering jobs today, as determining the most desirable skills is a crucial first step in the search for any type of talent.

A Shortage of . . . Talent?

If there is one thing that continues to keep employers awake at night since emerging from the global pandemic, it is the **talent shortage**. Today's talent shortage is felt across all industries, but it has hit the Information Technology and Engineering sectors especially hard. The pandemic fostered a rapid digital transformation in the way businesses work, while creating a demand for technical skills in many areas, including cybersecurity, cloud computing, and AI and machine learning. As a result, the job and talent landscapes have changed. Job growth and low unemployment rates are generally positive and welcomed trends; however, these developments come at a cost, and this growth has contributed to the pervasive talent shortage. The root of the problem for tech employers is that today's applicants lack specific technical skills, which means positions remain unfilled. One possible explanation for this lack is that the fast pace of technological change has many job seekers playing catch-up in terms of desirable skills. In fact, the "talent shortage," particularly in the IT and Engineering industries, can be better understood as a skills shortage, rather than simply a lack of candidates. So, how do both employers and job seekers find a way to address this problem?

The Skills Challenge

Today's technical businesses face the challenge of finding people who have the skills to power their respective industries, while job seekers face the challenge of acquiring the skills that are in demand. Given the speed at which digital technology evolves, this can be a daunting prospect. Candidates wonder what skills will be most beneficial in their job searches. What will boost their resumes and help them land the positions they desire? Will upskilling be beneficial, or will it be a waste of time to learn a skill that may quickly become outdated? Staffing firms and employers struggle with how to best address this skills shortage. Recruiters are tasked with finding candidates with all the necessary skills, while balancing the need for upskilling and training with the pressure to cut costs and save money.

Demand for Insight

CEIPAL's business is helping employers identify, acquire, and manage talent. More than 160,000 customers use CEIPAL's talent acquisition platform, which provides deep insights into the real business struggle to find people with the right skills for open positions. Over the course of 2022, customer demand for a deeper analysis of current hiring trends grew exponentially, as did the demand for more business intelligence in several key areas, including:

1. **Today's most in-demand IT & Engineering jobs**
2. **The most highly desirable skills that employers are searching for in these fields**
3. **Which skills employers should focus on when hiring for these jobs**
4. **Which skills candidates should focus on acquiring, as they prepare for the 2023 job market and beyond**

Delving into Data

With an intelligent platform that houses data from hundreds of thousands of job postings and applicants, CEIPAL is able to answer these questions and help navigate the skills landscape. Using data from a sample of over 85,000 job postings in the CEIPAL platform, "The Most In-Demand Job Skills in IT & Engineering" were compiled. This research reveals today's most popular job titles, as well as the locations and compensation for these positions. Most importantly, the report presents the most in-demand skills in the IT and Engineering sectors. CEIPAL's research provides insights into current hiring trends—the majority of the positions in the study are contingent, a category of labor that serves as an early predictor of market trends—and offers critical information for job seekers who want to be competitive in today's transformed job market. Additionally, the report will enable staffing firms and employers to discover opportunities to address necessary training, upskilling, and retraining of both the current workforce and prospective employees.



The Most In-Demand Job Skills in IT & Engineering

85,000+
Number of job postings in
CEIPAL used for this report

Posted by
700+ Recruiters

Data based on postings by
contingent staffing firms



Top Job

Software Engineer

40% of the top jobs
33% of all jobs collected

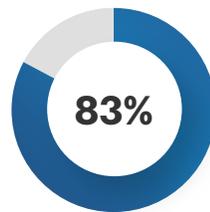
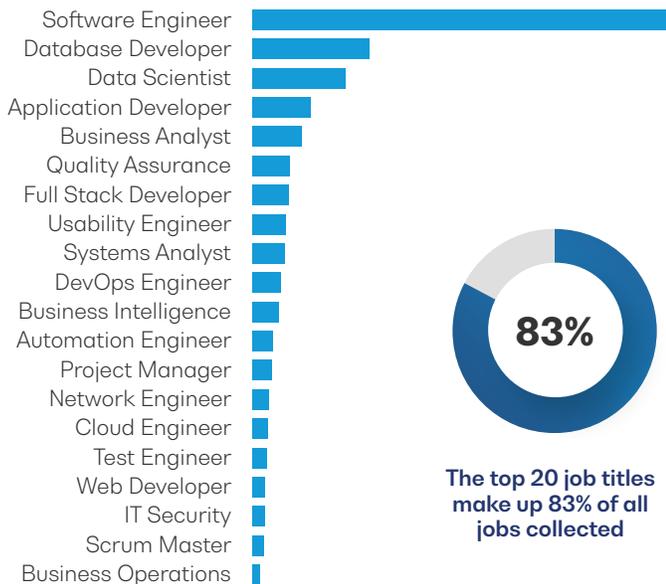


Top Skill

Java

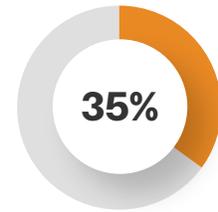
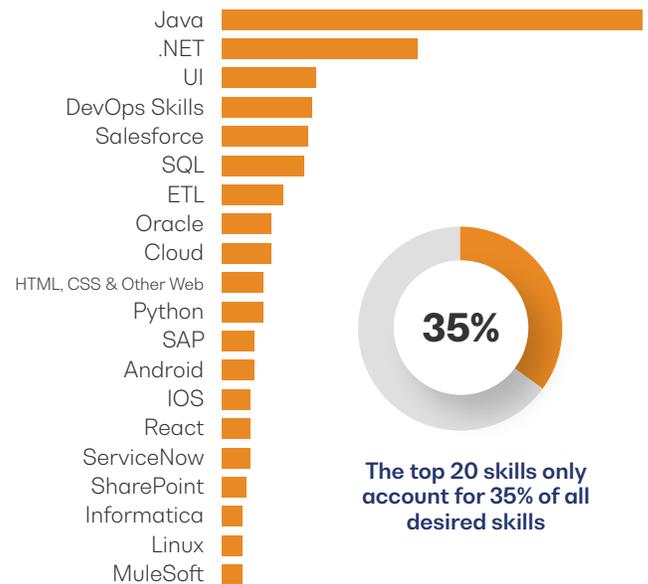
30% of the top skills
10% of all desired skills

Top 20 IT & Engineering Jobs



The top 20 job titles
make up 83% of all
jobs collected

Top 20 IT & Engineering Skills



The top 20 skills only
account for 35% of all
desired skills

Highest Paying Job

Cloud Engineer
\$77.50/hour
\$161,202 annualized



Highest Paying Skill

SAP
\$81.66/hour
\$169,860 annualized



Top Pay

New York State
\$73.03/hour
\$151,905 avg. annual equivalent



The **talent shortage**, particularly in the IT and Engineering industries, can be better understood as a **skills shortage**, rather than simply a **lack of candidates**.

The Top 20 Jobs

CEIPAL's research reveals that these are the 20 most in-demand jobs in the IT and Engineering industries among 85,000 jobs sampled. In fact, these 20 jobs **account for 83% of all job postings** in the study, meaning this an almost exhaustive list. Those searching for the top jobs in these fields need look no further. The majority of the positions are contingent and targeted toward highly qualified candidates who are experts in their respective fields.

The most in-demand job in the IT and Engineering industries for Q4 is Software Engineer. This position appeared in 28,267 postings, which accounted for 40% of the Top 20 Jobs in the study and just over one third of all the postings sampled. The next most frequently appearing job was Database Developer (7,889), representing almost 10% of the top postings. The role of Data Scientist was a close third with 6,288 postings. The Top 20 Jobs shown here are the most in-demand jobs in the IT and Engineering industries.

Top 20 IT & Engineering Job Titles

Job Title	Number of Postings	Frequency
Software Engineer	28,267	33%
Database Developer	7,889	9%
Data Scientist	6,288	7%
Application Developer	3,891	5%
Business Analyst	3,281	4%
Quality Assurance	2,484	3%
Full Stack Developer	2,453	3%
Usability Engineer	2,255	3%
Systems Analyst	2,192	3%
DevOps Engineer	1,912	2%
Business Intelligence	1,753	2%
Automation Engineer	1,339	2%
Project Manager	1,306	2%
Network Engineer	1,115	1%
Cloud Engineer	1,022	1%
Test Engineer	1,002	1%
Web Developer	866	1%
IT Security	810	1%
Scrum Master	800	1%
Business Operations	512	1%
Total Jobs	71,437	

By the Numbers

The top 20 jobs amounted to
71,437 out of 85,586 job postings.

Breakdown of Top Jobs

Average Pay for Top 20 IT & Engineering Job Titles

Job Title	Hourly Rate	Salary*
Cloud Engineer	\$77.50	\$161,202
IT Security	\$74.06	\$154,054
Application Developer	\$73.99	\$153,899
Scrum Master	\$72.60	\$151,017
Project Manager	\$69.84	\$145,270
Full Stack Developer	\$69.34	\$144,236
Business Intelligence	\$69.05	\$143,628
DevOps	\$69.02	\$143,556
Data Scientist	\$68.59	\$142,672
Network Engineer	\$67.18	\$139,728
Systems Analyst	\$67.08	\$139,527
Software Engineer	\$67.07	\$139,502
Automation Engineer	\$65.89	\$137,045
Business Analyst	\$65.81	\$136,880
Database Developer	\$65.07	\$135,343
Web Developer	\$65.06	\$135,324
Usability Engineer	\$65.03	\$135,255
Business Operations	\$63.25	\$131,567
Test Engineer	\$58.75	\$122,207
Quality Assurance	\$57.19	\$118,954

*Annualized

Insight

Although Software Engineer is the clear winner of the Top 20 Jobs, it is not the highest paying job found in the study. In fact, Software Engineer came in at the number 12 highest-paying job in the list. The job with the top-earning potential is Cloud Engineer with an average (annualized) salary of \$161,202.

The titles that rank higher in this list are more specialized than those lower on the list, which explains the difference in salary. As these positions are geared toward highly skilled workers, even experts in their fields, the Top 20 Jobs have excellent earning potential. Location of the jobs can be a factor in these findings, as employers in areas of higher population and higher cost of living typically offer higher salaries.

About the Jobs

The top jobs span a range of duties, but all require job seekers to have a certain set of skills to be successful. This section contains an index of short descriptions of the top jobs with basic responsibilities, experience level, skills typically needed (adapted from Glassdoor), and the average annualized salary for each.

Software Engineer

Average salary: \$140,000
#1 in job demand

Software engineers write, debug, maintain, and test software that instructs a computer to accomplish certain tasks, such as saving information or performing calculations. A software engineer uses many programming languages, the most common being **Java**, **C++**, and **Python**. A bachelor's degree in computer science or equivalent experience is needed for this job.

Database Developer

Average salary: \$135,000
#2 in job demand

Database developers create and implement computer databases by determining the best system for clients. They test database programs for efficiency and performance to ensure databases function correctly while troubleshooting and correcting issues. Typical skills required include **UNIX**, **Java**, **Oracle Apex**, **HTML**, **Python**, and **Agile**. A bachelor's or graduate degree in computer science, information systems, or information technology or equivalent experience is needed.

Section 4 | Breakdown of Top Jobs

Data Scientist

Average salary: **\$143,000**

#3 in job demand

Data scientists utilize their statistical and programming skills to collect, analyze, and interpret large data sets. They typically know statistics, coding languages, databases, machine learning, and reporting technologies. Experience using statistical computer languages (**R, Python, SQL**, etc.) to manipulate data and draw insights from large data sets is needed. Data scientists need a bachelor's degree in statistics, math, computer science, or economics.

Application Developer

Average salary: **\$154,000**

#4 in job demand

An application developer designs, creates, deploys, and updates programs for a particular device, the web, or a specific operating system. Developers work in almost all industries and typically specialize in one area of development, such as mobile phone applications. Key skills typically include **Java, Python, SQL**, and **Agile** methodologies. A bachelor's degree is needed.

Business Analyst

Average salary: **\$137,000**

#5 in job demand

A business analyst collects and analyzes data for potential business expansion and influences shareholders to support business projects. They rely on data and analytics to recommend measures and protocol to impact and improve a company's logistics more efficiently or directly. A bachelor's degree in business, economics, or related field is needed. Certification in necessary programs such as **Agile, SQL**, or **Scrum** is also typically required.

Quality Assurance

Average salary: **\$119,000**

#6 in job demand

Quality assurance analysts/engineers conduct tests on software, websites, and other technical products to identify and resolve bugs, defects, and other potential issues before a launch and then perform consecutive tests for maintenance. QA engineers will need a bachelor's degree in computer science and proficiency in computer programming languages such as **Java, Python, SQL, C++**, and **XML**. Experience in Linux, Windows, and software development and testing is usually required as well.

Full Stack Developer

Average salary: **\$144,000**

#7 in job demand

This senior-level computer programming position requires front- and back-end systems coding and project management experience with systems administration skills. A full stack developer will design user interactions on websites, develop servers and databases for website functionality, and write code for mobile platforms. A bachelor's or graduate degree in computer engineering, computer science, engineering, or information technology is required, as well as experience with software and processes, such as **Java, HTML**, and **CSS**.

Usability Engineer

Average salary: **\$135,000**

#8 in job demand

Usability engineers work to improve interactive systems, such as computer hardware, software, and websites. They define user needs and preferences through qualitative and quantitative research in order to make a user's job or experience with a product easier and faster. Duties may include research, website evaluation, usability testing, and data analytics. A bachelor's degree in computer science or other related field is required, and experience with **Java, CSS**, and **HTML** is typically necessary.

Section 4 | Breakdown of Top Jobs

Systems Analyst

Average salary: \$140,000

#9 in job demand

Systems analysts implement, maintain, and support IT and information systems to meet the business needs of organizations and scale as organizations grow. They create tests and develop specifications and requirements for developers and programmers to follow. Strong computer, hardware, software, and analytical skills are important, and a bachelor's degree in computer science or information technology, or equivalent experience is expected.

DevOps Engineer

Average salary: \$144,000

#10 in job demand

A DevOps engineer combines an understanding of both engineering and coding and works with various departments to create and develop systems within a company. From creating and implementing systems software to analyzing data and improving existing ones, a DevOps engineer increases productivity in the workplace and works to balance complex issues, such as programming and network building. A bachelor's degree is required for the position, with many holding advanced degrees in computer science, software engineering or related engineering fields.

Business Intelligence Analyst

Average salary: \$144,000

#11 in job demand

BI analysts gather and study business intelligence data, using this information to develop insights about competitors and the marketplace. BI analysts typically have a bachelor's degree in business intelligence or a computer science field. They must have strong data analysis and interpretation capabilities and be comfortable evaluating and dissecting statistics. Experience with **SQL** and **cloud software** is expected.

Automation Engineer

Average salary: \$137,000

#12 in job demand

Automation engineers design, program, simulate, and test automated machinery and processes and are typically employed in industries where robots or machines are designed to perform specific functions. They design schematics for automation components using CAD software and analyze production processes to assess automation's best use. A minimum of a bachelor's degree in mechanical engineering or electrical engineering and CAD software proficiency is required. Experience with **cloud**, **Python**, **SCADA**, **C**, and **Java** software and systems is needed.

Project Manager

Average salary: \$145,000

#13 in job demand

A technical project manager is the lead subject matter expert within the company regarding technology concerns. As this is a senior position held in a company, a master's degree in project management or a technology field is required.

Network Engineer

Average salary: \$140,000

#14 in job demand

Network engineers are responsible for the implementation, planning, and coordination of security systems and software that protects the technological infrastructure of a company/organization. They build and maintain the daily operations of computer networks at their work sites and monitor and administer computer networks and related computing environments, including systems software, application software, or hardware. A bachelor's or graduate degree in computer science, engineering, information systems, or information technology or relevant experience is necessary. Experience with **cloud computing**, scripting, and writing and routing protocols is also expected.

Section 4 | Breakdown of Top Jobs

Cloud Engineer

Average salary: **\$161,000**
#15 in job demand

Cloud engineers specialize in the creation, testing, and implementation of software applications at a company or an organization. They are responsible for the planning, design, management, maintenance, and support of cloud-computing applications. Cloud engineers need a bachelor's degree in information technology or computer science and fluency with programming languages, including **Java** or **C++**, **Python** and **Agile** practices.

Test Engineer

Average salary: **\$122,000**
#16 in job demand

Test engineers work to test products prior to their official launch to identify potential problems and ensure quality. A test engineer collaborates with various departments, such as network engineers, support, and operations to ensure a seamless product launch. A bachelor's or graduate degree in computer science, engineering, or information systems or equivalent experience is required. Experience with **SQL**, **SQL Server**, **SAS**, **Python**, **Java**, **Agile**, and **C** software and systems is typically expected.

Web Developer

Average salary: **\$135,000**
#17 in job demand

Web developers produce the design code and modify websites according to their client's specifications, handling every aspect of the process of a website's creation from layout to function. They develop and design web applications and software. A bachelor's or graduate degree in computer science, information systems, or information technology or equivalent experience. In addition, the following are desirable: **Agile**, **HTML**, **CSS**, **Java**, **SQL**, and **XML**.

IT Security Analyst

Average salary: **\$154,000**
#18 in job demand

IT security analysts design and implement IT security systems to protect an organization's computer networks from cyberattacks. They also develop organization-wide best practices for IT security, monitor computer networks for security issues, install security software, and document all security issues or breaches. An MBA in information systems is preferred, as well as experience in information security.

Scrum Master

Average salary: **\$151,000**
#19 in job demand

A scrum master should be knowledgeable in **Agile** methodology and scrum and able to educate others. They also act as a buffer between the scrum team and product owner and maintain a safe working environment for the team by helping with conflict resolution. To work as a scrum master, you need to hold some level of scrum master certification, and you must have experience in Agile techniques.

Business Operations

Average salary: **\$132,000**
#20 in job demand

A business operations analyst or engineer interprets data from multiple department reports, such as budgetary information. Responsibilities include interpreting financial data, monitoring expense reports, and performing a cost-benefit analysis of internal programs. A bachelor's degree in business administration, management or accounting is required. Advanced degrees such as a Masters or a Doctorate are necessary for senior or high-profile positions.

The Top 20 Skills

Determining the most popular jobs is just the first step in addressing the current hiring challenges. This study focused on the root of the talent shortage—skills. Once the most in-demand jobs were identified, the focus shifted to finding **the most highly desirable job skills in IT and Engineering**. The Top 20 Skills shown here amounted to a demand of 30,365 skills; however, unlike the Top 20 Jobs, which make up 83% of all postings, the Top 20 Skills only **account for 35% of all desired skills** in the jobs sampled.

The most frequently appearing skills in all postings were evaluated to determine the most desirable skills overall. **Java** is by far the most in-demand skill required (or perhaps expected) by employers in IT and Engineering today. Java accounted for almost 30% of the top skills seen above, and it appeared in over 10% of all the job postings. **.NET** is the next highly desired skill with just over 4,000 postings. **UI**, **DevOps** skills, and **Salesforce** are also in high demand, all appearing in close to 2,000 postings.

Top 20 IT & Engineering Skills

Skill	Number of Postings	Frequency
Java	8,784	10.26%
.NET	4,117	4.81%
UI	1,967	2.30%
DevOps Skills	1,912	2.23%
Salesforce	1,806	2.11%
SQL	1,733	2.02%
ETL	1,320	1.54%
Oracle	1,055	1.23%
Cloud	1,022	1.19%
HTML, CSS & Other Web	866	1.01%
Python	865	1.01%
SAP	721	0.84%
Android	704	0.82%
IOS	615	0.72%
React	565	0.66%
ServiceNow	563	0.66%
SharePoint	480	0.56%
Informatica	437	0.51%
Linux	430	0.50%
MuleSoft	403	0.47%

Total Jobs

30,365



Our analysis demonstrates that today's talent shortage is just as much about a skills gap as it is about personnel.

Amar Chadipirala, CTO, CEIPAL

Breakdown of Top Skills

Average Pay for Top 20 IT & Engineering Skills

Job Title	Hourly Rate	Salary*
SAP	\$81.66	\$169,860
Cloud	\$77.50	\$161,202
Salesforce	\$73.74	\$153,374
MuleSoft	\$73.32	\$152,508
Oracle	\$72.42	\$150,638
IOS	\$70.32	\$146,257
ServiceNow	\$69.93	\$145,450
React	\$69.62	\$144,815
Android	\$69.61	\$144,782
DevOps Skills	\$69.02	\$143,556
Informatica	\$68.47	\$142,416
Python	\$67.80	\$141,033
Java	\$67.37	\$140,122
ETL	\$66.92	\$139,201
HTML, CSS & Other Web	\$65.06	\$135,324
UI	\$64.95	\$135,106
.NET	\$64.78	\$134,733
SharePoint	\$64.52	\$134,212
SQL	\$62.01	\$128,979
Linux	\$61.58	\$128,094

*Annualized

Insight

Contrasting with the Top Job findings, the Top 20 Skills account for only 35% of all desired skills in our study, pointing to the fact that employers are interested in, or expect job seekers to have, a wide range of skills. When sorting the Top 20 Skills by average salaries, there is a notable difference in the order. You will notice that the most in-demand skills are not necessarily the highest-paid skills, but as you move down the list from most frequent to least, requirements become more specialized and result in higher pay. More specialized skills, such as SAP and Cloud skills, are not found as frequently in postings. Some skills and training are more easily accessible, such as Java, which may explain why most employers expect candidates to have that skill.

The skill with the highest salary in our study was SAP, though that particular skill only appeared 721 times, as opposed to the almost 8,800 appearances of Java. Despite the change in ranking, all the top skills are highly paid. Candidates who upskill will be more marketable, and candidates who specialize in certain sectors and have multiple skills will earn more.

About the Skills

This section contains an index of short descriptions of the top skills by order of frequency with the average annualized salary for each. Of note: many of these in-demand skills require knowledge of other skills. (Descriptions have been adapted from Techopedia and Berkeley Boot Camp.)

Java

Average salary: \$140,000
#1 in skill demand

Java is general-use and an object-oriented programming language that is used to build services and applications. Java is considered one of the easier languages to learn and can run on any operating system. Common uses include ecommerce, finance and app development.

.NET

Average salary: \$135,000
#2 in skill demand

.NET is an open-source software development platform that is used for building web, desktop, and mobile applications on Windows-based systems.

Section 6 | Breakdown of Top Skills

UI Average salary: \$135,000 #3 in skill demand	UI refers to User Interface Design, a process that focuses on design with users in mind and the way they interact with computers and technology. UI's goal is to provide consistency in visual, functional, or control elements in an interface.
DevOps Average salary: \$144,000 #4 in skill demand	DevOps refers to the practice of expediting the software development lifecycle by discovering ways to automate processes and improve communication between departments. DevOps utilizes Agile methodology, a form of project management involving engineering best practices and business approach.
Salesforce Average salary: \$153,000 #5 in skill demand	Salesforce is a cloud-based software product that is used for customer relationship management, helping marketing, sales, commerce, service, and IT teams manage data and connect with customers.
SQL Average salary: \$129,000 #6 in skill demand	Structured Query Language, or SQL, is a programming language that is designed for performing a large number of functions pertaining to database management. It consists of four categories of commands: data definition, data manipulation, data control, and database indexing and has been incorporated into numerous commercial database products.
ETL Average salary: \$139,000 #7 in skill demand	ETL is a process for Extracting, Transforming, and Loading in database use. This process involves methods of manipulating and processing data and then loading and transmitting data for storage.
Oracle Average salary: \$151,000 #8 in skill demand	This refers to the Oracle Database (Oracle DB, or just Oracle), which is a relational database management system. This database architecture is built around a framework that gives users access to data objects through SQL.
Cloud Average salary: \$161,000 #9 in skill demand	Cloud refers to cloud computing, which is a means of providing IT computing services and resources through the internet. Cloud takes the form of Software as a Service (SaaS), Platform as a Service (PaaS), or Infrastructure as a Service (IaaS).
HTML, CSS, & Other Web Average salary: \$135,000 #10 in skill demand	HTML, HyperText Markup Language, is used to "markup" or format the appearance of text on a website. CSS, or Cascading Style Sheets, is typically used in conjunction with HTML and applies style elements to a webpage, controlling the size, color, and positioning. Both HTML and CSS are used in website development and design.
Python Average salary: \$141,000 #11 in skill demand	Python is a multipurpose programming language, enabling coders to perform functional, object-oriented, and reflective programming. Often seen as easy-to-learn, Python is used for back end development, data science, and app development.

Section 6 | Breakdown of Top Skills

SAP

Average salary: \$170,000
#12 in skill demand

Service Advertising Protocol, or SAP, is a set of rules that enables servers, printers, and other devices to advertise addresses and services at recurring intervals. It is used by system administrators and application developers for adding and removing services.

Android

Average salary: \$145,000
#13 in skill demand

Android is a mobile operating system. An Android developer creates applications that run on mobile phones and tablets with an Android operating system. These apps are primarily written in Java.

IOS

Average salary: \$146,000
#14 in skill demand

IOS is a mobile operating system for Apple products. An IOS developer will create software applications that run on Apple mobile devices using the iOS system frameworks or the Objective-C programming language.

React

Average salary: \$145,000
#15 in skill demand

JavaScript is a programming language for designing interactive web elements; React is a JavaScript library. This library (pre-written code) is used for creating interactive websites that use real-time data.

ServiceNow

Average salary: \$145,000
#16 in skill demand

ServiceNow is a cloud-computing platform for structuring services in a company. Other skills like JavaScript, HTML, CSS, and .NET are essential for ServiceNow developers.

SharePoint

Average salary: \$134,000
#17 in skill demand

A common IT resource, SharePoint is a business platform that functions like a content management system with options for document management, networking portals, and Internet sites.

Informatica

Average salary: \$142,000
#18 in skill demand

Informatica is an ETL tool, and is used for creating enterprise data warehouses and providing data integration software and services for businesses.

Linux

Average salary: \$128,000
#19 in skill demand

Linux is an open source operating system based on UNIX. Well suited to programming, Linux is used by many as a development platform. This OS is commonly used as a server and also in desktop computers, smartphones, and gaming consoles.

MuleSoft

Average salary: \$153,000
#20 in skill demand

MuleSoft is an integration platform that connects applications, data, and devices from various sources for users. MuleSoft provides APIs (Application Programming Interfaces) for all types of applications and systems.

Top Paying States

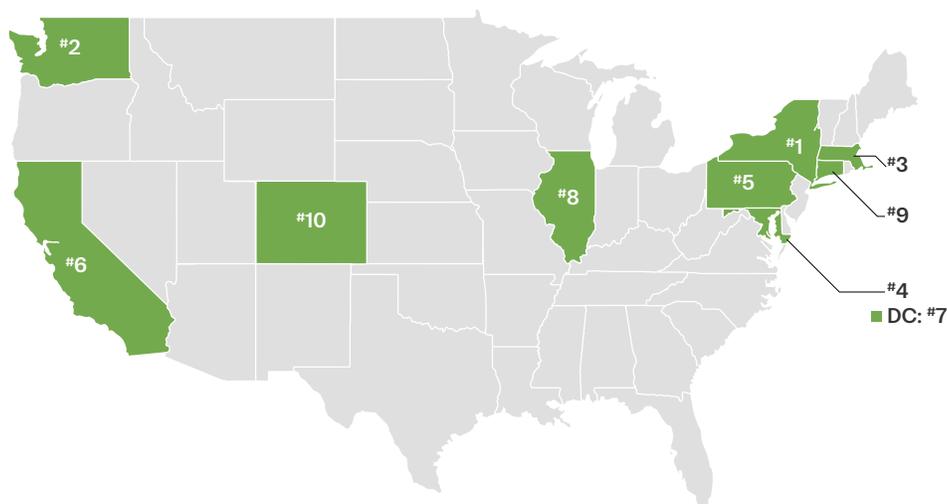
Where will you find the highest pay for these top skills? According to CEIPAL data, jobs in New York offer the highest pay to skilled, contingent workers. It is important to note that the location of an employer affects pay, and cost of living is definitely a factor in determining salary. Many of the states on this list have cities with the highest cost of living expenses in the country, which results in jobs with higher salaries.

This information may be of special interest to job seekers. Employers today are looking for skills over location, so remote workers in IT and Engineering can use this to an advantage. Among these Top 10 locations, even the lowest salary by state is only about \$8,000 below the top-ranking salary.

Top 10 Highest Paying States

State	Average Hourly Rate	Salary*
New York	\$73.03	\$151,905
Washington	\$71.19	\$148,081
Massachusetts	\$70.28	\$146,183
Maryland	\$70.24	\$146,096
Pennsylvania	\$69.80	\$145,187
California	\$69.80	\$145,185
District of Columbia	\$69.72	\$145,010
Illinois	\$69.57	\$144,699
Connecticut	\$69.50	\$144,561
Colorado	\$69.02	\$143,568

*Annualized Salary by Top Skills



Key Takeaways

The Hottest Jobs

CEIPAL's list of The Top 20 Jobs accounted for 83% of all the job postings in our collected data. These findings present an accurate picture of the most in-demand jobs in the IT & Engineering industries right now. Staffing firms, employers, and job seekers can all use this data to develop a strategy for hiring and job searching.

All About the Skills

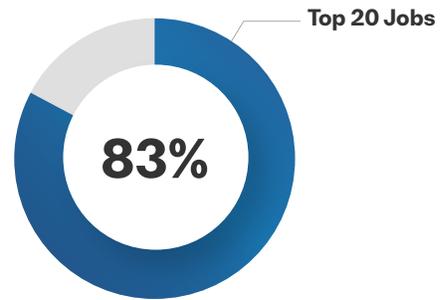
The study proves that skills are at the forefront of the hiring challenges that employers face today. CEIPAL found that the Top 20 skills only make up 35% of the skills that employers are searching for, which means that candidates need multiple skills to meet employers' expectations.

Hiring Expectations

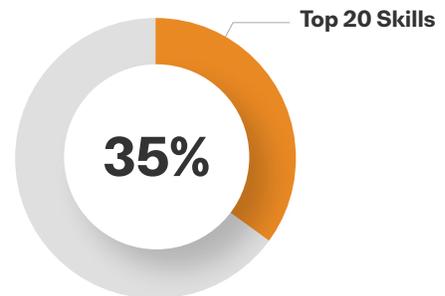
Recruiters are searching for specific sets of skills but also expect that candidates will have additional skills. The Top 20 Skills represent only 35% of the desired or expected skills—leaving another 65% of skills that did not show up as frequently, but are still desired. Is there a shortage of skills, or are there too many skills for candidates to keep up with? Perhaps the answer is both. Regardless, another critical question remains: how do recruiters, employers, and job seekers meet this challenge?

Address the Shortage with a Data-Driven Strategy

CEIPAL's data presents the current trends and requirements for jobs in the IT and Engineering industry. The Top 20 Jobs and Top 20 Skills show an accurate picture of what employers need from candidates right now and can help firms to evaluate their own data. Technology can help staffing firms address the skills issue by building a better talent pool and fostering better relationships with candidates through improved engagement.



Job Postings



Desired Skills



It's important for us to share the resulting industry insights with our customers, our peers in the staffing world, and the talent community at large. Given the current talent shortage, we believe that such critical research will help ensure that no talent is left behind in the year ahead.

Sameer Penakalapati, CEO, CEIPAL

Conclusion

Recruiters in the IT and Engineering sectors currently struggle to find candidates with the desired skills for open positions, but there are opportunities to address the skills shortage and improve hiring in the new year. While the shortage may persist for some time, employers can act strategically now by considering two crucial things: data and technology.

Armed with the information provided in the Most In-Demand Job Skills in IT & Engineering, recruiters and employers should begin by evaluating their current databases to determine if the top skills are abundant in a given talent pool. If the talent in an organization's database does not stack up, it is time to make updates. It is true that everyone is competing for talent, but the good news is that there is talent everywhere. From myriad job sites and social media to networking events and employee referral, there are more avenues than ever to discover the talent you need. Curate talent from multiple sources, and expanded search areas, to ensure a stronger talent pool. If the skills are there, then it is time to leverage technology and make the data work.

The importance of technology in addressing this issue cannot be overstated. CEIPAL's 2021 report, [How Technology Determined the Winners & Losers During the COVID Pandemic](#), highlighted how digital technology was a critical differentiating factor for businesses that survived the pandemic. Companies that embraced and leveraged certain key technologies, endured the downturn and fared much better than those that did not.

Implementing the right kind of technology is essential. Harnessing the power of artificial intelligence can help recruiters to source talent from multiple avenues faster than traditional methods. Automating and streamlining processes with advanced technology will improve productivity and help companies to hire faster and increase placements. But even with all that in place, it is important to understand that the best data is meaningless if a company cannot read it, understand it, and use it. Data has to be collected and stored in a system that can cycle through the data to organize and analyze it. With the right technology, companies can use automation to run through the data, which will result in meaningful analytics. This meaningful data can then be used in conversations with clients. It can inform their hiring practices, job descriptions, and overall approach to hiring.

Collecting the right data—in this case, the right candidates with the desired skills—and making that data meaningful with the aid of key technologies, will start businesses on their way to addressing the skills gap in the IT & Engineering industries.

CEIPAL's Most In-Demand Job Skills in IT & Engineering report presents clear data on current hiring in these industries and provides an accurate outlook for 2023. **CEIPAL will continue to share its data in quarterly updates to assist businesses in these uncertain times.** The findings offer a roadmap for staffing firms, employers, and job seekers alike. With it, they can navigate the difficult path ahead and succeed in addressing the current skills shortage.



The Top 20 Jobs and Top 20 Skills show an accurate picture of what employers need from candidates right now and can help firms to evaluate their own data.

Peter Velikin, CMO, CEIPAL

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