

THE 10 HARDEST JOBS TO FILL IN TECH • 2017

Andiamo analyzes hundreds of jobs across North America. These ten positions are among the most difficult to fill in the technology market. This information takes into consideration job title, time required fill the positions, geographic locations, and sought-after skills, talents, and technologies.

BIG DATA

Big data engineers develop, construct, and test large scale processing systems to manage massive amounts of data in the most efficient ways possible.

Top 5 Job Titles

Big Data Engineer

Data Visualization Developer

Data Analyst

Hadoop Developer /Architect

Data Engineer

Job Openings vs Qualified Candidates

18,136

618,348

of times job title appears on job boards

of people who have that skill on LinkedIn



Most Common Education Level & Major

PhD & M.S.

Computer Sci. Mathematics

Cities/States With the Most of These Jobs

Raleigh, NC

Boston, MA

San Francisco, CA

San Diego, CA

Dallas, TX



Skills & Talents

✓ High transaction - low latency

✓ Distributed systems

✓ Synchronization

✓ Search and discoverability

✓ Performance analytics

✓ Unstructured data

✓ Scalable software systems

Technologies Toolkit

JAVASCRIPT

Javascript developers create modernized interactive user-interfaces, design digital dashboards, and build complex responsive web applications using modern JavaScript frameworks for end users to click, input, pull up, or visually display information.

Top 5 Job Titles

Senior Full Stack Engineer

React.js Developer

Senior Web Engineer

Frontend Engineer - JavaScript

Angular.js Developer

Job Openings vs Qualified Candidates

4,545

82,759

of times job title appears on job boards

of people who have that skill on LinkedIn



Most Common Education Level & Major

B.A. & BOOTCAMPS

Computer Sci. Computer Eng.

Cities/States With the Most of These Jobs

New York, NY

San Francisco, CA

Chicago, IL

Seattle, WA

Washington, DC



Skills & Talents

✓ User-interface development

✓ RESTful APIs

✓ Web applications

✓ Testing frameworks

✓ Browser performance

✓ Scripting stored procedures

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NODE.JS

Node.js developers utilize a Javascript free and open source cross-platform for server-side programming that allows users to build network applications quickly. Node.js. uses event-driven programming to build scalable applications and network programs. Node.js is a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient. Node.js' package ecosystem, npm, is the largest ecosystem of open source libraries in the world.

Top 5 Job Titles

Node.js Developer

Javascript Developer

Full Stack Developer

Full Stack Engineer

Application Developer

Job Openings vs Qualified Candidates

5,515

119,576

of times job title appears on job boards

of people who have that skill on LinkedIn



Most Common Education Level & Major

B.A. & BOOTCAMPS

Computer Sci.
Computer Eng.

Cities/States With the Most of These Jobs

San Francisco, CA

New York, NY

Atlanta, GA

Arlington, VA

Baltimore, MD

Job Openings vs Qualified Candidates

5,515

119,576

of times job title appears on job boards

of people who have that skill on LinkedIn



Skill & Talents

✓ Distributed systems

✓ Object-oriented development

✓ Client-server architecture

✓ RESTful APIs

✓ Web application development

✓ Asynchronous JavaScript

Technologies Toolkit

nodejs

mongodb

mysql

postgresql

redis

expressjs

cassandra

CLOUD SERVICES

Cloud engineers develop computing infrastructure that give users a simple way to access servers, storage, databases and a broad set of application services. Cloud infrastructure, or Infrastructure-as-a-Service allows users and enterprises with various capabilities to store and process their data in either privately owned clouds, or on a third-party server in order to make data accessing mechanisms much more easy and reliable. Cloud engineers also maintain the network-connected hardware required for these application services.

Top 5 Job Titles

Cloud Software Engineer

AWS Engineer

Infrastructure Engineer

Cloud Operations Engineer

Cloud Solutions Architect

Job Openings vs Qualified Candidates

36,602

342,924

of times job title appears on job boards

of people who have that skill on LinkedIn



Most Common Education Level & Major

M.S.

Computer Sci.

Cities/States With the Most of These Jobs

Seattle, WA

New York, NY

San Francisco, CA

Chicago, IL

Atlanta, GA

Job Openings vs Qualified Candidates

36,602

342,924

of times job title appears on job boards

of people who have that skill on LinkedIn



Skills & Talents

✓ Infrastructure management

✓ Cloud platforms

✓ Continuous integration/deployment

✓ Storage and network domains

✓ High throughput systems

✓ Micro services

Technologies Toolkit

amazon web services

jenkins

docker

aws

openstack

amazon cloudfront

cloudera

cloud foundry

hana

openshift

paas

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SITE RELIABILITY ENGINEER (SRE)

SREs own the production environment, taking a software engineer’s approach to solving operations problems. They ensure that large-scale distributed systems are performing as optimally as possible, often focusing on automation, scalability, and capacity planning.

Top 5 Job Titles

Site Reliability Engineer

Infrastructure Engineer

Automation Engineer

Operations Engineer

System Administrator



Most Common Education Level & Major

B.S.

Computer Eng.
Computer Sci.

Cities/States With the Most of These Jobs

San Francisco, CA

New York, NY

Boston, MA

Seattle, WA

Los Angeles, CA

Job Openings vs Qualified Candidates

559

2,392

of times job title appears on job boards

of people who have that skill on LinkedIn



Skills & Talents

✓ Networking

✓ Virtualization

✓ Containerization

✓ Automation

✓ Reliability and efficiency

✓ Monitoring

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Nagios

Grafana

ELK

CHEF

puppet labs

SALTSTACK

VAGRANT

kubernetes

MESOS

ANSIBLE

DEVOPS

DevOps engineers focus on development, operations, and quality assurance. They are tasked with the design and construction of software and systems, along with its deployment, maintenance, and management.

Top 5 Job Titles

DevOps Engineer

Infrastructure Engineer

Automation Engineer

Systems Engineer

DevTools Engineer



Most Common Education Level & Major

B.S.

MIS,
Computer Eng.

Cities/States With the Most of These Jobs

San Francisco, CA

New York, NY

Seattle, WA

Boston, MA

Princeton, NJ

Job Openings vs Qualified Candidates

11,579

75,396

of times job title appears on job boards

of people who have that skill on LinkedIn



Skills & Talents

✓ Configuration management

✓ Build and release

✓ Orchestration

✓ Containerization

✓ Deployment Automation

✓ Continuous integration

✓ Monitoring

✓ Reliability

✓ Critical systems

Technologies Toolkit

docker

CHEF

amazon web services

puppet labs

JENKINS

Se Selenium

ANSIBLE

THE 10 HARDEST JOBS TO FILL IN TECH • 2017

INFORMATION SECURITY

Information security (infoSec) engineers create processes, tools, and policies necessary to prevent, detect, document and counter threats to information, software, networks, and infrastructure within an organization.

Top 5 Job Titles

Network Security Engineer

Risk Manager/ Security Audit

Information Security Engineer/Architect

Data Protection Engineer

Application Security Engineer

Job Openings vs Qualified Candidates

13,440

155,571

of times job title appears on job boards

of people who have that skill on LinkedIn



Most Common Education Level & Major

B.S.

Computer Eng.
Computer Sci.

Cities/States With the Most of These Jobs

New York, NY

Atlanta, GA

Arlington, VA

Jersey City, NJ

Stamford, CT

Job Openings vs Qualified Candidates

13,440

155,571

of times job title appears on job boards

of people who have that skill on LinkedIn



Skills & Talents

✓ Encryption

✓ Cryptography

✓ Network security

✓ Authorization

✓ Access management

✓ Application security

✓ Vulnerability assessment

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DATA SCIENCE

Data Scientists handle raw data, statistics, and information and work with distributed computing systems to create predictive models and analytics systems.

Top 5 Job Titles

Data Scientist

Data Analyst/ Engineer

Data Architect

Quantitative Analyst

NLP Developer/ ML Engineer

Job Openings vs Qualified Candidates

6,517

21,272

of times job title appears on job boards

of people who have that skill on LinkedIn



Most Common Education Level & Major

M.S.

Computer Sci.
Mathematics

Cities/States With the Most of These Jobs

New York, NY

San Francisco, CA

Seattle, WA

Chicago, IL

Washington, DC

Job Openings vs Qualified Candidates

6,517

21,272

of times job title appears on job boards

of people who have that skill on LinkedIn



Skills & Talents

✓ Statistical theories/ methodology

✓ Information retrieval

✓ Data mining

✓ Machine learning

✓ Natural language processing

✓ Data modeling

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MOBILE DEVELOPER

Mobile application developers write software for small, wireless computing devices such as smartphones or tablets. These mobile applications (apps) are often written specifically to take advantage of the unique features a particular mobile device offers.

Top 5 Job Titles

- Mobile Developer
- Application Developer
- Android Developer
- Mobile Applications Engineer
- iOS App Developer



Cities/States With the Most of These Jobs

- New York, NY
- Charlotte, NC
- Chicago, IL
- Washington, DC
- Boston, MA

Job Openings vs Qualified Candidates

2,430 **45,048**

of times job title appears on job boards
of people who have that skill on LinkedIn



Skills & Talents

- ✓ Cross-platform Development
- ✓ Graphical Interface Design
- ✓ Object-oriented architecture
- ✓ Web services technologies
- ✓ Test-driven development
- ✓ Distributed applications

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SOFTWARE ENGINEER

Software engineers apply the principles and techniques of computer science, engineering, and mathematical analysis to the design, development, testing, and evaluation of the software and the systems that enable computers to perform their many applications.

Top 5 Job Titles

- Senior Software Engineer
- Senior Software Developer
- SDE
- SDM
- Computer Programmer



Cities/States With the Most of These Jobs

- Seattle, WA
- New York, NY
- San Francisco, CA
- Chicago, IL
- Boston, NA

Job Openings vs Qualified Candidates

162,461 **2,765,935**

of times job title appears on job boards
of people who have that skill on LinkedIn








Skills & Talents








- ✓ Algorithms
- ✓ Data structures
- ✓ Object-oriented design
- ✓ Web applications
- ✓ Service-oriented architecture
- ✓ Dynamic programming
- ✓ Applications architecture

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COMPANIES HIRING THE MOST FOR THESE POSITIONS





FAST GROWING COMPANIES HIRING THESE TECHNOLOGISTS





ANDIAMO HAS PLACED TOP CANDIDATES:

IN THESE CATEGORIES

- Big Data
- Front End JS Frameworks
- Node.js
- Cloud Development
- SRE
- DevOps
- Information Security
- Data Science
- Mobile
- OOD



WITH THESE TITLES

Machine Learning Engineer,
NLP Engineer, Full Stack Engineer,
Frontend Engineer, Application Developer,
Infrastructure Engineer, Cloud Software
Engineer, DevOps Engineer, Network
Security Engineer, Information Security
Engineer/Architect, Data Scientist,
Data Engineer, Mobile Developer,
Senior Software Engineer



IN THESE LOCATIONS

- New York
- Seattle
- San Francisco
- Austin
- Salt Lake City
- Chicago
- Boston
- Dallas
- Jersey City, NJ
- Greenwich, CT
- Durham, NC
- St. Louis

CLIENTS WE HAVE HELPED:

