



Computer Science Jobs

Computer science is a critical field in our current and future industry. The first part of the list uses the BLS data to identify the different career pathways available in computer science. The second list will focus on the current job market and positions.

- | | |
|---|--|
| <p><input type="checkbox"/> 1. Computer Programmers
Create, modify, and test the code and scripts that allow computer applications to run.
Median annual salary: \$93,000
https://www.bls.gov/oes/current/oes151251.htm</p> | <p><input type="checkbox"/> 7. Computer System Analyst
Develop and implement solutions to complex computer systems, administrative issues, or network concerns.
Median annual salary: \$99,270
https://www.bls.gov/oes/current/oes151211.htm</p> |
| <p><input type="checkbox"/> 2. Software Developers
Research, design, and develop computer and network software or specialized utility programs.
Median annual salary: \$120,730
https://www.bls.gov/oes/current/oes151252.htm</p> | <p><input type="checkbox"/> 8. Information Security Analyst
Plan, implement, or monitor security measures for the protection of computer networks and information.
Median annual salary: \$102,600
https://www.bls.gov/oes/current/oes151212.htm</p> |
| <p><input type="checkbox"/> 3. Software QA Analyst and Testers
Develop and execute software tests to identify software problems and their causes.
Median annual salary: \$98,220
https://www.bls.gov/oes/current/oes151253.htm</p> | <p><input type="checkbox"/> 9. Computer Network Architects
Design and implement computer and information networks, including LAN, WAN, etc.
Median annual salary: \$120,520
https://www.bls.gov/oes/current/oes151241.htm</p> |
| <p><input type="checkbox"/> 4. Web Developer
Develop and implement websites, web applications, application databases, and interactive web interfaces.
Median annual salary: \$77,030
https://www.bls.gov/oes/current/oes151254.htm</p> | <p><input type="checkbox"/> 10. Computer Network Support Specialist
Analyze, test, troubleshoot, and evaluate existing network systems.
Median annual salary: 62,760
https://www.bls.gov/oes/current/oes151231.htm</p> |
| <p><input type="checkbox"/> 5. Web and Digital Interface Designer
Design digital user interfaces or websites.
Median annual salary: \$79,890
https://www.bls.gov/oes/current/oes151255.htm</p> | <p><input type="checkbox"/> 11. Computer User Support Specialist
Provide technical assistance to computer users.
Median annual salary: 62,760
https://www.bls.gov/oes/current/oes151232.htm</p> |
| <p><input type="checkbox"/> 6. Special Effects Artists and Animators
Create special effects or animations using film, video, computers, or other electronic tools and media.
Median annual salary: \$78,790
https://www.bls.gov/oes/current/oes271014.htm</p> | <p><input type="checkbox"/> 12. Network and Computer Systems Administrators
Install, configure, and maintain an organization's network, OS, and physical and virtual servers.
Median annual salary: \$80,600
https://www.bls.gov/oes/current/oes151244.htm</p> |

COMPUTER SCIENCE CAREERS



Computer Science Jobs

- 13. Database Administrator
Administer and implement computer databases using robust database management systems.
Median annual salary: \$96,710
<https://www.bls.gov/oes/current/oes151242.htm>
 - 14. Database Architect
Design strategies for enterprise databases, data warehouse systems, and multidimensional networks.
Median annual salary: \$123,430
<https://www.bls.gov/oes/current/oes151243.htm>
 - 15. Computer Hardware Engineer
Research, design, develop, or test computer or computer-related equipment.
Median annual salary: \$128,170
<https://www.bls.gov/oes/current/oes172061.htm>
 - 16. Electronics Engineer
Research, design, develop, or test electronic components and systems.
Median annual salary: \$104,820
<https://www.bls.gov/oes/current/oes172072.htm>
 - 17. Health Information Technologists
design, development, and continued modification and analysis of computerized healthcare systems.
Median annual salary: \$55,560
<https://www.bls.gov/oes/current/oes299021.htm>
 - 18. Graphic Designer
Design or create graphics to meet specific commercial or promotional needs.
Median annual salary: \$50,710
<https://www.bls.gov/oes/current/oes271024.htm>
 - 19. Computer Science Teacher
This includes computer science teachers in elementary, middle school, and high school, or postsecondary schools.
Median annual salary: \$30,100 - \$77,910
<https://www.bls.gov/oes/current/oes252023.htm>
<https://www.bls.gov/oes/current/oes253031.htm>
<https://www.bls.gov/oes/current/oes251021.htm>
-

Reference: www.bls.gov, <https://www.bls.gov/ooh/computer-and-information-technology/>



Computer Science Job (Industry)

This second part of the list focuses on the current positions in the CS job market and their responsibilities. While this list intends to explore the different career pathways available in computer science, it is not complete and will continue to grow as new specializations and concentrations arise.

Help Desk and Support (IT)

- 1. Desktop Support Analyst
The desktop support analyst resolves clients' problems with their computer hardware and software.
- 2. Help Desk (Tier 1)
Take initial telephone or email inquiries and troubleshoot and manage relatively simple hardware, software or network problems, while recognizing and escalating more difficult problems.
- 3. Help Desk (Tier 2)
Resolve more complex issues requiring detailed systems and applications knowledge escalated from Tier 1, deciding whether the issue requires physical handling of the user's PC or laptop.
- 4. Help Desk (Tier 3)
Research and resolve the most difficult and complex problems that other help desk levels have been unable to resolve. Analyze and identify trends in issue reporting and devising preventive solutions
- 5. Product Support Specialist
Product support specialists assist users with issues and concerns regarding a company's products, offering software and technical support and resolving problems.

Quality Assurance (QA), Testing and Auditing

- 6. IT Auditor
IT auditors are responsible for performing detailed evaluation and internal control and audit reviews of computer information systems
- 7. Testing/QA Engineer
Automated QA engineers plan and develop automated test suites for software products. They use and develop new tools to test products and improve engineering processes.
- 8. Manual QA Engineer
Manual QA engineers define the scope and objectives of various levels of QA testing. They also write and maintain test automation, publish test results, develop QA standards, and define and track QA metrics.
- 9. QA Analyst/Associate
QA analysts/associates create test cases to locate errors in internal software applications, provide accurate documentation and make recommendations on how to improve applications

10. Automated QA Engineer

Automated QA engineers plan and develop automated test suites for software products. They use and develop new tools to test products and improve engineering processes

Networking and Cloud (IT)

11. Network Operations Center Technician

Network operations center (NOC) technicians are responsible for monitoring a company's network systems. These professionals are around-the-clock first responders for troubleshooting routers, switches and phone platforms.

12. Telecommunications Specialist

Telecommunications specialists create, install and maintain computer technology designed for the purposes of communication, including video and data systems.

13. Network/Cloud Administrator

Network/cloud administrators need determination and strong problem-solving skills. They are relied upon for their expertise in network protocols, software and hardware involved in LAN/WAN operations.

14. Network/Cloud Engineer

Network/cloud engineers are detail-oriented problem solvers with in-depth knowledge of networking hardware and software. They use traditional and creative methods to ensure the stability and integrity of in-house voice, data, video and wireless network services.

15. Network/Cloud Architect

Network/cloud architects design networks and extensions to networks with an eye toward growth and security; they possess excellent problem-solving skills.

16. Wireless Network Engineer

Wireless network engineers design, configure and troubleshoot a company's wireless LAN and other wireless technologies.

Security (IT)

17. Network Security Administrator

Network security administrators are responsible for installing, administering and troubleshooting an organization's security solutions. They integrate and implement network designs by evaluating business strategies and requirements, researching network security standards, and identifying integration issues.

18. System Security Administrator

Systems security administrators maintain and support existing business system applications. Candidates must demonstrate knowledge of data systems security procedures and familiarity with systems hardware and software, and they should be up to date with industry security trends and developments as well as applicable government regulations.

19. Network Security Engineer
Network security engineers are responsible for the implementation, maintenance, and integration of the corporate WAN, LAN and server architecture. This individual is also responsible for implementation and administration of network security hardware and software, enforcing the network security policy and complying with requirements of external security audits and recommendations.

20. Data Security Analyst
Data security analysts develop, maintain and update the systems that protect an organization's data from a cyberattack or breach.

21. Security Architect
Security architects design, build, test and implement security systems within a company's IT network. These professionals also help the organization to continually refine its IT security infrastructure and approach to protect against hackers, malware and similar threats.

Operations (IT)

22. Computer Technician
A computer technician maintains and repairs computer hardware, software and connectivity. The role requires excellent problem-solving and customer service skills.

23. Cable Technician
Cable technicians install, maintain and repair an organization's cable infrastructure, including video surveillance, access systems, alarm systems and networks.

24. Hardware Analyst
Hardware analysts evaluate existing and future IT infrastructure needs within a company.

25. System Administrator
Systems administrators are responsible for the reliable operation of an entire computer system or network, such as a LAN, WAN or intranet, including servers and databases.

26. System Engineer
A systems engineer designs and provides support for an organization's IT infrastructure. In addition to in-depth knowledge of the company's software and hardware, systems engineers need advanced analytical and troubleshooting skills.

27. Business Continuity Analyst
Business continuity analysts collaborate with business managers, business continuity leads/teams and infrastructure teams to identify the operations, processes and technologies required in building and maintaining optimal continuity plans.

Data and Database Administration

-
- | | |
|---|---|
| <input type="checkbox"/> 28. Data Report Writer
Report writers are responsible for helping extract and report an organization's data in a way that is meaningful to business decision makers. Typical duties include analysis of complex data systems and documenting data elements, data flow, relationships, and dependencies. | <input type="checkbox"/> 29. Data Warehouse Analyst
Data warehouse analysts collect, analyze, mine and help businesses leverage the information stored in data warehouses. Professionals in this role research and recommend technology solutions related to data storage, reporting, and importing, as well as other business concerns. |
| <input type="checkbox"/> 30. Data Technology Analyst
Data analysts provide advanced insight and decision support for business operations. They scrutinize and assemble raw data from multiple sources, generate reports, automate best practices and build dashboards that improve efficiency, profit and productivity. | <input type="checkbox"/> 31. Business Intelligence Analyst
Business intelligence analysts work with databases, dashboards, and other tools to analyze data and provide insights for business decision making. Candidates need a strong background in database technology and Enterprise Resource Planning systems, with an emphasis on the use of analytical and reporting tools. |
| <input type="checkbox"/> 32. Database Administrator
Database administrators design databases tailored to a company's needs and ensure they operate efficiently and securely. They bring a strong foundation in database configuration, installation and maintenance. | <input type="checkbox"/> 33. Database Developer
Database developers are responsible for developing and maintaining new servers with the correct database architecture. Candidates must be skilled at writing SQL code, designing new systems and understanding front-end user requirements. |
| <input type="checkbox"/> 34. Database Manager
Database managers are creative, analytical thinkers who prioritize customer needs and satisfaction and leverage that information to create customer solutions. They prioritize and handle multiple tasks independently and ensure data is properly coded, input and updated in the database. | <input type="checkbox"/> 35. Database Scientist
Data scientists develop innovative solutions to business challenges by applying their mathematical and analytical skills to detect patterns in very large datasets. Their work improves the performance of information systems and databases and leads to technological advancements and efficiencies, such as better networking technology, faster computing speeds and improved data security. |
| <input type="checkbox"/> 36. Data Architect
Data architects must be able to understand and evaluate business requirements and translate that information into specific database solutions. Drawing on their knowledge of network management, distributed databases and processing, application architecture, and performance management, they ensure an organization's data is properly assembled and available when needed and that data centers are secure, co-located and accessible. | <input type="checkbox"/> 37. AI Architect
AI architects apply artificial intelligence (AI) to a company's existing IT infrastructure and business processes. These professionals must have deep knowledge of machine learning and natural language processing concepts. AI architects must also understand AI integration and AI application programming. |

38. Big Data Engineer

Big data engineers are liaisons between business users and data scientists. They are designers and curators of databases and know how to get results from vast amounts of data quickly.

Software and Applications Development

39. E-Commerce Analyst

E-commerce analysts analyze data and make recommendations concerning an organization's online sales strategy. They also participate in the design and development of web-based e-commerce solutions.

41. Web Developer

Web developers create websites and applications using programming languages such as HTML, CSS and JavaScript. Candidates should have in-depth knowledge of internet protocols and applications in addition to a solid understanding of business strategy.

43. Systems Analyst

Systems analysts translate business requirements into IT solutions. They must be analytical thinkers, problem solvers and communicators. These professionals apply methods such as data modeling to view processes and data flows even before programs have been written.

45. Scrum Master

Scrum masters guide and coach Scrum teams on how to use Agile practices and principles for software development to deliver high-quality products and services. Candidates for this position typically need extensive experience working in an Agile environment, ideally with the Scrum project management framework.

40. Front-End Developer

Front-end developers create web- and mobile-based applications and work on website maintenance and enhancements. They code, design and edit layout and functionality of websites. Strong technology, creative and communication skills are needed for this role.

42. Technical Writer

Technical writers must interpret complex issues and communicate information to broad audiences clearly and concisely.

44. Cloud Computing Analyst

Cloud computing analysts plan and engineer an organization's cloud computing infrastructure and applications. The position requires innovative thinking along with analytical, communication and problem-solving skills.

46. DevOps Engineer

DevOps engineers are the bridge between coding and engineering, working across departments to develop and improve IT systems. They often work with coding languages like C++, Java, Perl, Python and Ruby, and configuration management tools for IT automation like Ansible, Chef, Puppet, and SaltStack.

- 47. Site Reliability Engineer
Site reliability engineers develop and maintain computer systems and monitor application performance. These professionals use software engineering principles and coding and automation skills to solve infrastructure and operations problems and create highly scalable and reliable systems.
- 48. Customer Relationship Management (CRM) Business Analyst
CRM business analysts are relied upon for their analytical and problem-solving capabilities, as well as extensive IT and functional experience to cultivate a positive customer relationship. They are expected to analyze customer data and offer recommendations on sales, marketing and customer service initiatives.
- 49. CRM Developer
CRM developers design and advance integrations and customizations for CRM solutions. They are expected to work creatively and analytically with other development staff and system and database administrators to ensure enterprise applications meet the needs of the business.
- 50. Enterprise Resource Planning (ERP) Analyst
ERP analysts collaborate with business partners to examine, design and implement robust employer solutions; document system requirements; develop functional design documentation; configure solutions; and conduct unit/integration testing to ensure customer expectations are met.
- 51. ERP Technical Developer
ERP technical developers craft, implement and modify applications using multiple ERP modules, and they gather and interpret functional specifications and user requirements to determine feasibility of design, on deadline and within budget.
- 52. Developer/Programmer Analyst
Developer/programmer analysts formulate and define scope of systems and objectives with an understanding of software and applications programming and industry requirements. They provide recommendations for developing or modifying applications, code, programs or databases, using research and fact-finding, ensuring that the delivered product meets the user's expectations.
- 53. Software Developer
Software developers play a key role in the design, installation, testing and maintenance of software systems. They are often involved with writing and coding programs or modifying third-party software to suit a business's needs.
- 54. Software Engineer
Software engineers design and create engineering specifications for software programs and applications. Candidates for this position should have broad information systems experience and strong critical thinking and problem-solving skills. .
- 55. Mobile Applications Developer
Mobile applications developers collaborate with designers, front-end developers and product stakeholders to deliver solutions for difficult or complex issues. They write programs using languages such as Java and Kotlin (for Google Android) and Objective-C and Swift (for Apple iOS). User experience (UX) and user interface (UI) design skills are also increasingly valued by employers
- 56. Application Architect
Applications architects are responsible for designing, developing and implementing applications for a company's computer systems. They oversee the work of the entire IT team and must be appreciative of the needs of the user and translate them into flow charts for programmers to code.

Reference: <https://www.roberthalf.com/>; <https://www.indeed.com/>;