NOVA | Northern Virginia Community College

Business Engagement and Career Services

Opportunities in Information Technology



Career Resources Guide

Introduction

As students navigate their academic journey, understanding career pathways is essential for making informed decisions about their future. Career planning involves recognizing industry trends, identifying potential employers, and equipping oneself with the necessary skills and qualifications to succeed in their selected field. This guide aims to provide an in-depth exploration of NOVA's six key career fields—Business and Finance, Construction & Skilled Trades, Healthcare, Information Technology, Public Administration, and STEM (Science, Technology, Engineering, and Mathematics)—highlighting top employers, in-demand job titles, resume, cover letter, and interview strategies, as well as programs of study (majors) at Northern Virginia Community College (NOVA) that lead to careers in each field. Beyond this guide, students can learn more information and opportunities in these key fields here .



Top Employers (by Number of Positions)

The following table lists the top employers in the information technology industry (by number of positions). These organizations are known for contributing to their respective industries and offering competitive employment opportunities. The data reflects the organizations identified through the analysis of labor market information provided by the Fairfax County Economic Development Authority (FCEDA) and Arlington Economic Development (AED).

1. Amazon Web Services (AWS)	6. ICF
2. Oracle	7. Mitre
3. Appian	8. Microsoft
4. Cisco	9. Freddie Mac
5. Carahsoft	10. Google

Note. This table is illustrative and not exhaustive. For comprehensive and up-to-date information, please refer to the respective organizations' publications.

Sources:
https://fairfaxcountyeda.org/key-industries/
https://www.arlingtoneconomicdevelopment.com/Key-Industries

Top Job Titles



Understanding the most sought-after job titles in the information technology industry can help students tailor their career preparation. Below are some key job titles in the Washington-Arlington-Alexandria, DC-VA-MD-WV area, based on the latest data from the U.S. Bureau of Labor Statistics .

1. Software Developers
2. Computer User Support Specialists
3. Computer and Information Systems Managers
4. Computer System Analysts
5. Information Security Analysts
6. Network and Computer Systems Administrators
7. Computer Network Architects
8. Operations Research Analyst
9. Software Quality Assurance Analysts and Testers
10. Data Scientists

Note. This table is illustrative and not exhaustive. For comprehensive and up-to-date information, please refer to the respective organizations' publications.

Source: https://www.bls.gov/oes/2023/may/oes_47900.htm

Resume and Cover Letter Tips

Resume and cover letter templates are widely available online, offering various options for different professional levels, including college students entering the workforce. Websites are available to provide resume and cover letter templates. When selecting a template, consider the following tips to ensure it highlights your strengths and aligns with your career goals:

Pick the Right Format:

- Chronological: Ideal for those with relevant work experience, as it highlights your job history. This format is popular among employers who value experience.
- Functional: Best for those with limited work experience or gaps in their employment history, as it focuses on skills rather than past positions.
- Combination: A balanced format that showcases both skills and experience. This is a good choice if you have some experience but also want to emphasize skills.

Know Your Audience: Different industries have different expectations. For example, a creative resume template may be suitable for graphic design roles, while a more professional template is better for law or banking. When in doubt, choose a simple, clean design.

Play to Your Strengths: Choose a template that reflects your professional personality. The template should showcase your skills, interests, and experience in a way that feels authentic to you.

Ask for Feedback: Before finalizing your resume, consider seeking input from trusted friends, family, or mentors. They can offer valuable perspectives on what works best.

Source: https://www.hloom.com/resume/templates

Tailoring Your Resume and Cover Letter



Resume Tips

An IT resume should have important information and skills listed at the top. Bullet points should be used instead of paragraphs in the body of the resume, and the number of bullet points used should be limited. Adding personality to make the tech resume interesting is encouraged. Personal projects, open source contributions, and blogs should be added, and the style and formatting should not be overboard.

Cover Letter Tips

An IT cover letter should rephrase qualifications to be understandable to a layman. The cover letter should follow professional formatting. The opening paragraph must include the strongest argument for why you're qualified, the company name, and the position you are applying for. Skills should be quantified with data, and troubleshooting for typos is essential.

Sample Resume

Your Full Name

Your City, State, ZIP
Your Email Address | Your Phone Number | LinkedIn Profile | GitHub Portfolio

Objective

Motivated IT graduate from Northern Virginia Community College with hands-on experience in networking, troubleshooting, and scripting. Seeking an IT internship or entry-level position to apply technical skills in a collaborative, solutions-focused environment.

Education

Northern Virginia Community College (NOVA) — Annandale, VA
Associate of Applied Science in Information Technology
Graduated: May 2025

- Relevant Coursework: Networking Fundamentals, IT Support, Linux Administration, Introduction to Cybersecurity, Python Programming

Technical Skills

Important information and skills

- **Languages:** Python, Bash, PowerShell
- **Networking:** Cisco Packet Tracer, TCP/IP, Subnetting, DHCP, DNS
- **Operating Systems:** Windows, Linux (Ubuntu), macOS
- **Tools & Platforms:** Git, VirtualBox, Wireshark, Microsoft 365, Active Directory
- **Soft Skills:** Problem-solving, Communication, Teamwork, Time Management

Projects & Contributions

Home Network Optimization Project

Bullet points instead of paragraphs

- Designed and implemented a secure home network using a dual-band router and VLANs
- Increased network speed by 35% and reduced latency using QoS and channel optimization

GitHub: Python Automation Scripts

- Developed scripts for automating file backups, system maintenance, and data parsing
- Available at: github.com/yourusername

Open source contributions

Experience

IT Support Intern (Remote) – TechBridge Mentorship Program
June 2024 – August 2024

- Assisted with troubleshooting hardware and software issues for 20+ users
- Documented solutions and user guides, reducing repeated service requests by 15%

Certifications

- CompTIA A+ (Expected June 2025)
- Cisco CCNA (In Progress)
- Google IT Support Certificate (Coursera, 2024)

Sample Cover Letter

Your Full Name
Your City, State, ZIP
Your Email Address | Your Phone Number

Date: [Insert Date]

[Recipient's Name]
[Recipient's Title]
[Agency/Organization Name]
[Address]
City, State, ZIP

Dear [Recipient's Name],

I am writing to express my I am writing to express my strong interest in the IT Support Internship position at [Company Name], as advertised. With hands-on technical training from Northern Virginia Community College's Information Technology program and real-world experience troubleshooting software and hardware issues during a recent internship, I am confident in my ability to contribute meaningfully to your team.

States why applicant is interested in the position

At NOVA, I completed coursework in networking, Python programming, and system administration, and developed a deep understanding of configuring and maintaining Windows and Linux environments. During my internship with TechBridge, I resolved over 20 user-submitted support tickets, wrote clear documentation to reduce future issues, and contributed to a 15% decrease in recurring problems. I also created automation scripts to handle basic maintenance tasks, which are available on my GitHub portfolio.

States why applicant is qualified for the position

Beyond academics and internship experience, I continuously seek to improve my skills through certifications (currently pursuing CompTIA A+ and CCNA) and personal projects like optimizing my home network for better performance and security.

I'm eager to bring my technical ability, curiosity, and team-oriented mindset to [Company Name]. Thank you for considering my application. I would welcome the opportunity to interview and discuss how I can help your IT department succeed.

Thanks employer and shows enthusiasm for the opportunity

Sincerely,

Your Full Name

Interview Tips

For IT interviews, project a positive and attentive attitude while maintaining consistent eye contact. Structure responses and articulate them clearly. Remember that interviewers are interested in your technical skills and how well you would fit as part of the team. It is important to stay current with the latest IT developments and discuss recent trends in IT that may be important for the organization. It is also important to be enthusiastic. You should use semantics to make an engaging conversation and be clear and succinct.

Sample questions for information technology Interviews:

1. How do you keep your technology skills current?

2. How do you keep up with the latest advancements in AI, and what experience do you have working with AI tools?

3. What strengths do you think are most important in a developer (or another relevant tech position)?

4. What is your favorite software development methodology, and why?

5. What does success mean to you?

Source:
"13 Must-Ask Tech Interview Questions" - Robert Half

NOVA Programs of Study

Northern Virginia Community College (NOVA) offers specialized programs that align with workforce needs. These programs prepare students for entry-level positions and further academic advancement. The following information highlights the NOVA's programs of study that lead to the six career fields (NOVA, n.d.):

Business and Finance:

- Accounting: Accounting Information Security with Data Analytics, C.S.C.
- Business Administration, A.S.
- Business Management, A.A.S.
- Business Management: Business Information Technology, C.S.C.
- Business Management: Entrepreneurship, C.S.C.

Construction & Skilled Trades:

- Automotive Technology: Electric, Hybrid, and Autonomous Vehicles, C.S.C.
- Architecture Technology: Computer Aided Drafting and Design, C.S.C.

Public Administration:

- n/a

Information Technology:

- Computer Science, A.S.
- Cybersecurity, A.A.S.
- Cybersecurity, C.S.C.
- Engineering Technology: Data Center Operations Specialization, A.A.S.
- Engineering Technology: Data Center Operations, C.S.C.
- Engineering Technology: Engineering Technology Technician, C.S.C.
- Information Systems Technology, A.A.S.
- Information Systems Technology: Application Programming, C.S.C.
- Information Systems Technology: Artificial Intelligence and Data Analytics, C.S.C.
- Information Systems Technology: Cloud Computing Specialization, A.A.S.
- Information Systems Technology: Cloud Computing, C.S.C.
- Information Systems Technology: Database Specialist, C.S.C.
- Information Systems Technology: Fiber and Network Technician, C.S.C.
- Information Systems Technology: IT Technical Support, C.S.C.
- Information Systems Technology: Mobile Application Development, C.S.C.
- Information Systems Technology: Network Administration, C.S.C.
- Information Systems Technology: Network Engineering (Specialist), C.S.C.
- Information Systems Technology: Web Design and Development, C.S.C.
- Information Technology, A.S.

Healthcare:

- Health Information Management, A.A.S.
- Health Information Management: Clinical Data Coding, C.S.C.
- Health Information Technology, C.S.C. (Discontinued Fall 2024)

STEM (Science, Technology, Engineering, Mathematics):

- Computer Science, A.S.
- Engineering Technology, A.A.S.
- Geographic Information Systems (GIS), C.S.C.

Source:
Programs of Study, Northern Virginia Community College

NOVA Programs of Study Leading to Specific Careers in the IT Field

Opportunities	Non-Transfer Tracks	Transfer Tracks
Programs of study to support entry into these employment opportunities are currently offered at NOVA	*These career paths allow you to enter the workforce immediately after graduation from NOVA.*	*These career paths require transfer for additional education beyond NOVA.*
Software Developers	Information Systems Technology: Application Programming, C.S.C. | Information Systems Technology: Mobile Application Development, C.S.C.	Computer Science, A.S.
Computer User Support Specialists	Information Systems Technology: IT Technical Support, C.S.C. | Information Systems Technology, A.A.S.	N/A
Computer and Information Systems Managers	Information Systems Technology, A.A.S.	Information Technology, A.S.
Computer System Analysts	Information Systems Technology, A.A.S. | Information Systems Technology: Database Specialist, C.S.C. | Information Systems Technology: Cloud Computing Specialization, A.A.S.	N/A
Information Security Analysts	Cybersecurity, A.A.S. | Cybersecurity, C.S.C.	N/A
Network and Computer Systems Administrators	Information Systems Technology: Network Administration, C.S.C. | Information Systems Technology: Network Engineering (Specialist), C.S.C.	N/A
Computer Network Architects	Information Systems Technology: Network Engineering (Specialist), C.S.C. | Information Systems Technology: Fiber and Network Technician, C.S.C.	N/A
Operations Research Analysts	Information Systems Technology, A.A.S. | Engineering Technology: Data Center Operations Specialization, A.A.S.	N/A
Software Quality Assurance Analysts and Testers	Information Systems Technology: Application Programming, C.S.C. | Information Systems Technology: Artificial Intelligence and Data Analytics, C.S.C.	N/A
Data Scientists	Information Systems Technology: Artificial Intelligence and Data Analytics, C.S.C.	N/A

Conclusion

Navigating career pathways requires careful planning, industry awareness, and continuous skill development. As community college students explore potential careers, leveraging available resources—such as NOVA's career services and industry connections—can significantly enhance employability. By understanding industry trends, aligning academic pursuits with workforce demands, and crafting effective job application materials, students can position themselves for long-term career success.



NOVA Career Resources



Career Development:

https://www.nvcc.edu/student-resources/career-services/career-development.html

Understand four key stages: understanding self, exploring careers & majors, decide & plan, and employment preparation. Students can use tools such as free career aptitude and assessment tests, Career Coach, Occupational Outlook Handbook, and Workforce - Labor Market Research to explore career options, set goals, and prepare for employment.

Career Planning System- Focus 2:

https://www.nvcc.edu/student-resources/career-services/focus2.html

FOCUS 2 is an online, interactive, self-guided career and education planning system that can help you select a program/major based on your interests and aspirations, discover occupations matching your personal preferences and attributes, map out your career plans, and make informed career decisions.

Handshake:

https://nvcc.joinhandshake.com/login

Sign in to Career Connection to search and apply to jobs and Internship, view and participate in career development workshops, career fairs, employer information sessions, and access resources such as the Resume Builder and Mock Interview practice tool.

Career Counseling:

https://www.nvcc.edu/student-resources/career-services/contact.html

Students can request an appointment with a Career Counselor by logging into Handshake, navigating to the Career Center page, and selecting “Appointments.”

NOVA Career Resources

Career Opportunities:

https://www.nvcc.edu/student-resources/career-services/career-opportunities.html

The Employer and Career Services Team is pleased to offer Career Opportunities for NOVA students and alumni! Review these opportunities and don't forget to log into Handshake to view more.

Coordinated Internships & Cooperative Education (Co-op):

https://www.nvcc.edu/student-resources/career-services/co-op/index.html

Coordinated Internships are an extension of Academic Services that provides work-based experiential learning opportunities through collaboration between academic departments and community employers. Students may enroll in Coordinated Internship course.

Career Events:

https://www.nvcc.edu/student-resources/career-services/career-events.html

View the Handshake Events Calendar for career development workshops, career fairs, employer information sessions, community hiring events (external) and more!

Additional Career Resources:

https://www.nvcc.edu/student-resources/career-services/career-resources.html

Contact Information

Questions? Feel free to contact novacareerservices@nvcc.edu.

