

SOFTWARE ENGINEERING- Career Resource Guide

Potential Career Options

Below is a sample of related career options; for some, additional experience and/or further education may be helpful or required.

Application Programmer/Developer	Write programs that tell computers how to perform specific tasks. Develop user-oriented programs that apply to engineering or science.
Computer Security Specialist	Protect data and computer resources from viruses, natural disasters, fraud and invasion of privacy.
Computer/Software Engineer	Design software including coding, testing, debugging, documentation and implementation. Evaluate existing communications, hardware and software.
Consultant	Work independently or in a firm to identify technical problems and provide solutions. Conduct testing and feasibility studies.
Design Engineer	Design software and hardware for specific business or engineering applications. Construct and test prototypes and models.
Process Engineer	Oversee the process for developing a software product. Work with managers, programmers, distributors and the public.
Software Product Manager	Develop business plans, determine if software is compatible with system, and oversee pricing, packaging, shipping and contracts with customers.
Systems Analyst	Examine the overall informational needs of the company and design or recommend computer systems and networks to address those needs. May conduct coding, testing, debugging, documentation and implementation of software.
Systems Programmer	Design and develop software to create a computer system. Develop programming standards and evaluate and modify existing software.
Telecommunication Analyst	Design communication networks. Install and operate data links.

Sample Job Titles

Application Developer	Quality Engineer
Applications Engineer	Reliability Engineer
Computer Engineer	Research and Development
Computer Programmer	Sales
Computer Security Specialist	Software Design & Development
Consultant	Software Engineer
Design Engineer	Software Programmer
Information Systems Engineer	Systems Analyst
Network Engineer	Systems Designer
Operations System Manager	Systems Programmer
Process Engineer	Technical Writer
Product Development Engineer	Technology Development Program
Project Engineer	Telecommunication Analyst

Career Information Resources

Vault is a comprehensive career resource that includes industry and profession overviews; rankings and profiles for employers and internship programs; a job and internship database; career articles, blogs and videos; sample resumes, cover letters and interview questions; and over 100 career guides. A selection of the Vault Guides is listed below.

Vault Guide to...
Computer Software Jobs
Engineering Jobs
Information Technology Jobs
Top Tech Employers

Vault Career Guide to...
Information Technology

Note: Refer to the CPDC website for a link to Vault as well as the CPDC Tip Sheets and Handshake job postings.

Associations & Societies

Association for Computing Machinery (ACM) *	www.acm.org
Association for the Advancement of Artificial Intelligence (AAAI) *	www.aaai.org
Association for Women in Computing **	www.awc-hq.org
Computing Research Association *	www.cra.org
IEEE Computer Society *	www.computer.org
National Society of Black Engineers (NSBE) *	www.nsbe.org
National Society of Professional Engineers (NSPE) *	www.nspe.org
Society of Hispanic Professional Engineers *	www.shpe.org
Society of Women Engineers *	www.swe.org

* Contains employment listings

** Contains employment listings for members

Career & Employment Websites

Computerjobs.com	www.computerjobs.com
Computerwork.com	www.computerwork.com
Dice	www.dice.com
EngineeringJobs	www.engineeringjobs.com
Graduating Engineer & Computer Careers	www.graduatingengineer.com
iHireTechnology	www.ihiretechnology.com
IT Careers at CareerBuilder.com	www.informationtechnology.careerbuilder.com
IT Diversity Careers	www.itdiversitycareers.com
Occupational Outlook Handbook- Search Computer Programmers/Software Developers	www.bls.gov/ooh
Pittsburgh Career Connector (Pittsburgh Technology Council)	www.pghcareerconnector.com

Note: A helpful list of general job search websites is available on the Internet Tip Sheet at www.rmu.edu/cpdc.

Selected RMU Activities & Organizations

American Society of Mechanical Engineers	Society for the Advancement of Management
Arab Engineers Club	Society of Women Engineers
Association of Computing Machinery	Student Government Association
Community Advisors	Student Program Board
Mechatronics Engineering Club	Student Tutors
National Society of Black Engineers	Women's Leadership and Mentorship Program Mentors

Bachelor-Level Internship Organizations

Applied Cloud Systems	NASA/LARSS
Bayer Corporation	PHW Inc.
Bombardier Transportation	PLS Logistics Services
Centria	Robert Morris University IT Department
DDI	Rockwell Software
Fresenius	RoPro Design
Genco	Tate-Jones, Inc.
Iron Bridge Integration, Inc.	United States Steel Corporation
Lucas Systems	Westinghouse Electric
Moderne Glass	Wilcox Bros.

Bachelor-Level Hiring Organizations

Amazon	NASA
Boeing Industries	NetApp
Chromalox	Perryman Company
Decision Resources Inc.	PNC Bank
DeepLocal Inc.	Prodigo Solutions, Inc.
FedEx Services	Robert Morris University
Honeywell	Ryder Transportation
Iron Bridge	Schroeder Industries, LLC
ISM Services, Inc.	Selective Insurance
Key Source Medical	STC Computers
Michael Baker Corporation	Steel City Collectibles
Miles Technologies	United States Steel Corporation