

Software Developer

About my job:

As a software developer, I act as the creative mind behind computer programs. I might develop the applications that allow people to do specific tasks on a computer or I might develop the underlying systems or networks.



What I do every day:

- Modify existing software to adapt to new hardware, or to improve its performance
- Develop and direct software system testing and procedures, programming and documentation
- Coordinate with systems analysts, engineers, programmers and others to design systems and improve capabilities, performance requirements and interfaces
- Evaluate user needs and software requirements to determine feasibility of design, time and cost constraints
- Design, develop and modify software systems
- Store, retrieve and manipulate data for analysis of system capabilities
- Oversee the work of programmers, technologists and technicians
- Coordinate software system installation and monitor equipment functioning to ensure specifications are met
- Obtain and evaluate information on reporting formats required, costs and security needs
- Develop and comply with corporate security guidelines

What makes my job great?

Job growth:

Employment of software developers is projected to grow 22 percent from 2012 to 2022, due to the large increase in the demand for computer software.

Short-term training:

Software developers usually have a bachelor's degree in computer science and strong programming skills.

Good pay:

The median salary is \$73,400 per year. (That means that 50 percent of software developers earn less and the other 50 percent earn more.)

Benefits:

Most software developers work full time with benefits that may include:

- **Healthcare**
- **Paid vacation**
- **Flexible schedule and location**
- **Tuition assistance**

How can you become a software developer?



Academic/training credentials:

Bachelor's degree with programming experience.

Other credentials:

Most software developers earn a bachelor's degree in computer science or software engineering. Software engineers who complete an ABET accredited software engineering program may be registered as a professional engineer (P.E.).

Work experience/internships:

Internship opportunities provide students with relevant experience to help them get hired. Others begin work as computer programmers and advance to careers in software development.

Skills and requirements:

- Computer programming skills
- Problem solving skills
- Excellent attention to detail
- Strong verbal and written communication skills
- Knowledge of system development lifecycle
- Data modeling skills
- Relevant work experience

Potential job titles:

- Programmer analyst
- Software development engineer
- Data modeler
- Software architect
- Software developer
- Applications developer
- Business systems analyst

Where you can find jobs:

- Online job boards
- Social media
- Information technology recruiting firms
- Career fairs
- Networking with family, friends and teachers
- IT consulting firms
- Company websites
- Department of Career Services at colleges

Potential local employers:

- the Cleveland Clinic
- Cornerstone Technology
- CyberCoders
- Key Bank
- Parker-Hannifin
- Progressive Insurance
- Sherwin-Williams.



Local educational opportunities

Two-year institutions:

- Lakeland Community College: Associate of Applied Business Computer Science/Software Engineering Concentration
 - Lakeland Community College: Associate of Applied Business Computer Science/Application Programming and Development Concentration
 - IT specialist certificate
 - IT professional certificate
- Contact Lakeland Information Technology & Computer Science Department Chair at 440.525.7265.
- Cuyahoga Community College: Associate of Applied Business in Information Technology: Programming and Development



Ohio College Tech Prep
Building Quality Career Pathways

High School Tech Prep:

- Auburn Career Center: information support and services program
- A Tech: computer information systems program
- Lake Shore Compact: computer information systems program
- Excel TECC: information technology and programming program
- Contact your high school guidance office



Coursework per educational entity:

Secondary pathway:
Computer Information Technology

Postsecondary program:
Programming and Software Development

An Example of Course with Secondary and Postsecondary Credits

Secondary	7	English I	Algebra I	Physical Science	Social Studies	Fine Arts	World Languages	
	8							
	9	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Programming	World Languages
	10							
Postsecondary	11	English III	Algebra II	Chemistry	U.S. History	Information Technology	Object Oriented Programming	Microsoft Windows
	12	English IV	Trigonometry/Calculus	Physics	U.S. Government	Programming Logic	Database Applications	
	Year 1 1st Semester	English	College Seminar	Intro to Business	Programming Logic	Using Microsoft Windows	College Mathematics	
	Year 1 2nd Semester	Business Communication	Java Programming	Programming I for iOS	Introduction to SQL	Health and Fitness	Social and Behavioral Science Elective	
Postsecondary	Year 2 1st Semester	Organizational Behavior	Java/Android Programming II	Programming II for iOS	Ethics in Information Technology	Network+ and Networking Essentials	Arts and Humanities Elective	
	Year 2 2nd Semester	Principles of E-Business	Java/Android Programming III	Programming III for iOS	IT Capstone	Natural Science Elective	Technical Elective	
High School Career-Technical Education Program Courses								
High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses								
Required Courses								
Recommended Electives								
<small>Visit education.ohio.gov/CareerConnections for reference information. Course titles and sequences will vary between schools.</small>								
Ohio Department of Education			Ohio MEANS Jobs			Ohio Board of Regents University System of Ohio		

How can I grow my career?

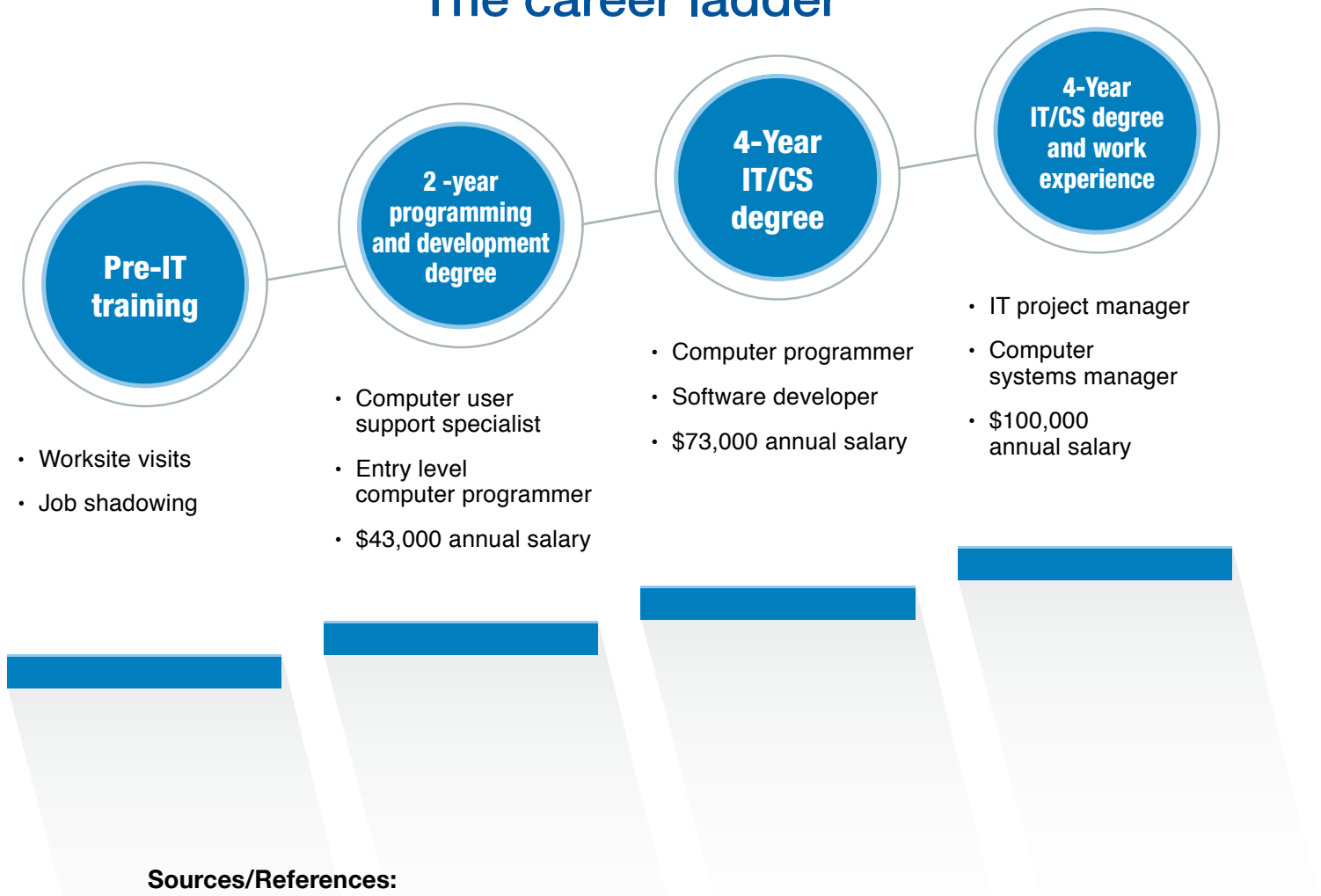


A software developer requires a bachelor's degree in computer science or other technical degree. Additional work experience as a computer programmer is also helpful.

Where could I focus or specialize in my career?

- Computer user support specialist
- Computer programmer
- Database administrator
- Computer and information systems manager
- Project manager

The career ladder



Sources/References:

Ohio Means Jobs, Bureau of Labor Statistics – Occupational Outlook Handbook
 O*Net Online-Summary Report, Ohio Labor Market Information