Software Engineering

Architects of the digital age and information economy! From smartphones and gaming equipment to wearable technologies and smart home devices, computer systems are ingrained into daily lives. Software and computer science engineers develop applications and programs that can accomplish a range of functions.

Where do Software Engineers Work?

Software engineers work in a variety of organizations, including:

- Software Developers
- Computer System Design Firms
- Electronics Manufacturers
- Universities
- Start-Ups

Explore Our Software Curriculum

Grades 3-5:

Navigating a Maze
Sumobot Challenge
Robot Soccer Challenge

Grades 6-8:

Mars Rover App Creation
Automatic Floor Cleaner Computer Program Challenge
Wear's the Technology?

Grades 9-12:

Testing Software Programs with JUnit
Flow Charting App Inventor Tutorials
Java Programming: Testing the Edges

Software engineering spans many disciplines, but is generally broken into a few subfields:

mathematical foundations, algorithms, data structures, artificial intelligence, communication and security, databases, software engineering, and programming language.

What do Software Engineers Study?

Knowledge of one or more computer programming languages is essential for software and computer science engineers. In addition to the understanding of data structures, algorithms, numerical methods, graphics, statistics, and data visualization, software and computer science engineers study logic, human-computer interactions, programming, and design. Hands-on projects for software and computer science engineers are often multidisciplinary and may include programming software, designing hardware solutions and computer circuits, or testing machine learning systems.

TeachEngineering
STEM curriculum for k-12