Bachelor of Science in Computer Engineering
https://www.tacoma.uw.edu/set/programs/undergrad/cengr

Where do Computer Engineers work?

Computer engineers can work in a variety of industries and sectors, including:

Technology companies: Many computer engineers work for technology companies that design, develop, and manufacture computer hardware, software, and other high-tech products.

Computer hardware and software companies: Computer engineers can also work for companies that specialize in designing and manufacturing computer hardware and software, such as Intel, IBM, and Microsoft.

Research and development organizations: Computer engineers may work for research and development organizations, such as government agencies or private research labs, where they can help develop new technologies or improve existing ones.

Aerospace and defense industries: Computer engineers may work for aerospace and defense companies that develop software and hardware for military and civilian applications.

Automotive industry: Many automotive manufacturers and suppliers rely heavily on computer engineers to design and develop the software and electronics that control modern vehicles.

Healthcare industry: With the increasing use of technology in healthcare, computer engineers may work for hospitals, medical device manufacturers, or healthcare technology companies to develop and improve medical equipment and software.

Financial industry: Computer engineers may work for financial institutions to develop and maintain banking and financial systems, including trading platforms, risk management systems, and other financial software.

Overall, computer engineers have a broad range of career opportunities, and their skills and expertise are in high demand across many industries.

What are the typical job responsibilities of Computer Engineers?

The job responsibilities of computer engineers can vary depending on their specific role, industry, and company. However, here are some typical responsibilities that computer engineers may have:

Design and develop computer hardware and/or software: Computer engineers may be responsible for designing and developing computer hardware or software, from concept to implementation. This could include designing circuit boards, writing code, testing and debugging software, and working with other engineers to integrate systems.

Maintain and improve existing systems: Computer engineers may also be responsible for maintaining and improving existing computer systems, including hardware, software, and networks. This may involve troubleshooting issues, implementing upgrades, and identifying areas for improvement.

Collaborate with cross-functional teams: Computer engineers often work closely with other teams, such as software developers, hardware engineers, and project managers, to develop and implement new systems and technologies.

Stay up-to-date with emerging technologies: As technology continues to evolve, computer engineers need to stay up-to-date with the latest trends and emerging technologies. This may involve attending industry conferences, reading research papers, and experimenting with new tools and techniques.

Document and communicate technical information: Computer engineers must be able to document their work and communicate technical information to non-technical stakeholders. This could include writing technical reports, creating presentations, and providing training to other team members.

Overall, computer engineers play a critical role in designing, developing, and maintaining the computer systems that power our modern world. Their job responsibilities are varied and often require a mix of technical skills, creativity, and collaboration.

Our **BS in Computer Engineering** emphasizes **Microprocessor Design** and **Embedded Systems.**

Embedded systems are a ubiquitous component in many consumer products, and they continue to enable new functionalities and user experiences in a wide range of industries and applications.

The Bachelor of Science degree program in Computer Engineering is accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org.

ABET

What are Embedded Systems?

Embedded systems are computer systems that are built into devices or products that are not traditionally considered to be computers. They are designed to perform specific tasks and are often integrated into devices or products to provide a specific functionality. Here are some examples of embedded systems:

Home appliances: Many home appliances, such as refrigerators, washing machines, and coffee makers, contain embedded systems. These systems control the operation of the appliance and enable it to perform its specific functions.

Automobiles: Modern automobiles contain many embedded systems, including those that control the engine, braking, steering, entertainment and navigation systems, and safety features such as airbags and backup cameras.

Medical devices: Many medical devices, such as pacemakers, blood glucose monitors, and imaging equipment, contain embedded systems. These systems are critical to the functioning of the device and can help improve patient care and outcomes.

Consumer electronics: Many consumer electronics, such as smartphones, tablets, and smartwatches, contain embedded systems. These systems enable these devices to perform specific functions and interact with other devices and networks.

Industrial control systems: Many industrial control systems, such as those used in manufacturing, energy, and transportation industries, contain embedded systems. These systems are used to control and monitor equipment and processes, and can help improve efficiency, safety, and productivity.

Embedded Systems

Overall, embedded systems are critical components in many devices and products that we use every day, and they play an important role in our modern world.

Here are some specific examples of consumer products that are embedded systems:

Smart TVs: Smart TVs contain embedded systems that enable them to access the internet, stream videos, and run apps. These systems are typically based on a combination of hardware, such as processors and memory, and software, such as operating systems and user interfaces.

Smart speakers: such as Amazon Echo and Google Home, contain embedded systems that enable them to respond to voice commands, play music, and interact with other smart home devices. They are built with microcontrollers, digital signal processors, and wireless communication modules.

Fitness trackers: Fitness trackers, such as Fitbit and Garmin, contain embedded systems that enable them to track physical activity, monitor vital signs, and provide feedback on health and fitness goals. They are built with a combination of sensors, microcontrollers, and wireless communication modules.

Home security systems: Home security systems, such as Ring and Nest, contain embedded systems that enable them to detect intruders, monitor activity, and provide alerts to homeowners. These systems are based on a combination of sensors, microcontrollers, and wireless communication modules.

Gaming consoles: Gaming consoles, such as PlayStation and Xbox, contain embedded systems that enable them to run video games, interact with online gaming communities, and provide multimedia entertainment. They include processors, memory, and graphics chips.
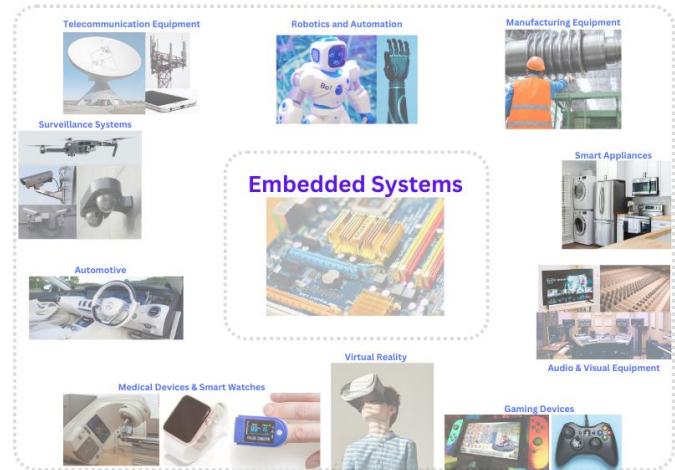
Digital cameras: Digital cameras contain embedded systems that enable them to capture and store images, and provide a range of features and settings, such as image stabilization, autofocus, and exposure control. They have a combination of processors, sensors, and memory.

Smartwatches: Smartwatches contain embedded systems that enable them to track physical activity, provide notifications, and interact with other devices, such as smartphones and headphones Smartwatches have a combination of microcontrollers, sensors, and wireless communication modules.

Smart home devices: Smart home devices, such as smart thermostats, smart lights, and smart locks, contain embedded systems that enable them to communicate with other devices and perform automated tasks. These systems are typically based on a combination of microcontrollers, wireless communication modules, and sensors.

Portable media players: Portable media players, such as iPods and MP3 players, contain embedded systems that enable them to store and play music, videos, and other digital media. These systems are typically based on a combination of processors, memory, and storage.

E-readers: E-readers, such as Kindle and Nook, contain embedded systems that enable them to display and store digital books, and provide features such as adjustable fonts and built-in dictionaries. These systems are typically based on a combination of processors, memory, and display technologies.

$164,970
The median annual salary for computer engineering occupations in WA.
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