**OVERVIEW**

Computer vision is a field of computer science that involves the development of digital devices that can imitate human sight and respond accordingly to meet the needs of users for a variety of applications. Some of the best-known uses of computer vision technology include self-driving cars and facial recognition on smart phones. Computer vision software engineers are creative, analytical problem solvers who assist with the design of digital applications that involve computer vision technology. They analyze users’ needs and collaborate to formulate feasibility estimates. Then develop algorithms for creating computer programs that control computer-vision applications. Computer Vision Software Engineers help design components of devices that use computer-vision technology, and conduct tests to debug the programs and products they design. Finally, they provide information to sales and customer support professionals about how products that utilize computer vision technology work.

**EVALUATE YOUR INTEREST**

- I love learning by doing. My favorite activities at school involve hands-on experiences such as labs, field trips, and research.

- I love seeing how the complicated science and math concepts. I learn about them in the classroom and how to apply them to the real world.

- I love working with digital devices and thinking about new applications that can help people solve problems. I am curious about how computer software and hardware work together to complete tasks and make people’s lives easier.

- I enjoy working with people from different areas of expertise with different strengths.

- I am a problem-solver. I have a knack for asking smart questions that help others identify problems and issues. I work with others to formulate solutions to problems.

- I am a detail-oriented planner who can provide clear instructions that are easy for others to follow.
Computer Vision Software Engineer

How does this career affect me?

Devices that utilize computer vision technology are becoming more and more present in our everyday lives. Facial recognition applications on smart phones make them more secure and enjoyable. Blind-spot monitoring systems and adaptive cruise control features make vehicles safer and easier to operate. Advanced imaging equipment helps doctors to accurately diagnose and treat medical issues. Computer vision software engineers design programs that make these life-changing products accessible to the general population and enable them to work effectively and efficiently.

What are some other similar careers?

Computer and Information Research Scientists are innovators who find new uses for computing technology and come up with ideas for new approaches to technology.

Computer Hardware Engineers design, build and test computer hardware systems and parts.

Chemical Programmers write and test code for software programs.

Computer Support Specialists provide troubleshooting help and general advice to individuals and organizations that use computer systems.

How does this career affect the world?

The advancement of computer vision technology is one of the most groundbreaking features of the digital revolution. It has brought to reality a longstanding vision of machines using characteristics of human intelligence to solve human problems. Products using computer vision technology have enhanced vehicle safety and promise to make self-driving cars accessible to the public. They also have contributed to the utility of cameras on smart phones and increased the effectiveness of medical imaging applications. The work of computer vision software engineers contributes to the face-paced improvement and advancement of the digital devices that change commerce, transportation, medicine, and everyday home life on a global basis.

TAKE ACTION

☐ Select a digital device in your household and become an expert on the device’s various applications. Teach family members and friends how to use lesser known features of the device. Brainstorm ideas for new applications or ways in which existing applications might be improved.

☐ Join a science-oriented club at school that is involved with designing and creating new products and applications that can solve problems. Possibilities include robotics, a computer science club, or coding. Establish as a personal goal working to earn the opportunity to occupy a leadership position on a specific project or within the group.

☐ Complete an in-person or web-based coding tutorial or class. Familiarize yourself with various coding languages such as Java, Python, and HTML. Be able to explain their basic purpose and learn more about the languages of applications that spark your interest.