



STUDENT ACTIVATION



Visualization Engineer

Visualization is an emerging technology that helps scientists and engineers investigate physical systems virtually, often utilizing 3D technology, advanced **CAD** software, and virtual reality. The field uses psychology, graphic arts, data management, computer science, and other skills to create simulations of events or systems.

VISUALIZATION ENGINEER

Visualization engineers are the professionals who create the simulations, models, virtual reality environments, and reconstructions that allow others to visualize a system or event. They use critical thinking and modeling skills to aid in problem-solving or deconstructing system breakdowns. They assist others in thinking and seeing abstract concepts or events in three dimensions.

CAD (computer-aided design)

The use of software to create 2D and 3D models.

IS VISUALIZATION ENGINEER A GOOD CAREER FOR ME?

| Me | Visualization Engineer |
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| I have a curious mind. I like to predict and solve big problems. | Visualization engineers help solve complex problems by creating immersive simulations of systems or events. |
| I am interested in school subjects like technology and computers. | Visualization engineers study computer science and technology in college. |
| I like having the newest technology available to me. | Visualization engineers work with emerging technologies and are always learning. |
| I am very spatially aware. I am good at video games and enjoy using virtual reality. | Visualization engineers create virtual reality environments, models, and simulations to help others understand events and systems. |
| I enjoy explaining things. I like working with others. | Visualization engineers are strong communicators. They enjoy working in interdisciplinary teams. |

Visualization Engineer

STUDENT ACTIVATION (CONTINUED)



| How does this career help me? | How does this career help the world? |
|--|---|
| <p>Visualization, and specifically data visualization, is a facet of almost every industry. Therefore, odds are you will encounter visualization at some point during your career. Utilizing the cognitive skills of visualization can help you perform better at a number of tasks, which can make you valuable to teams and an asset to your employer.</p> | <p>Visualization helps team members and global consumers understand complex data, systems, or events easily and more quickly, making it easier to communicate important information universally. It also allows companies to act quickly and achieve success at greater speed, which benefits stakeholders and customers.</p> |

| What are some similar careers? |
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| <p>Data visualization specialists use complex sets of data from multiple sources to develop dashboards and user-friendly visualizations to help users understand the data.</p> <p>Data analysts analyze company data to help teams make informed decisions. Many utilize visualization technologies to do so.</p> |

Here are ways to practice the skills to be a successful **visualization engineer**:

- Take a class in which you can learn how to use CAD software to create detailed models.
- Recreate an event in 3D. See if you are able to communicate to others what occurred with your model or simulation. Solicit feedback about their ability to visualize the event based on your project.
- Research and investigate emerging technologies in the fields of engineering, aeronautics, and space exploration.

