

# 4 JOBS WITHIN ENTERTAINMENT ENGINEERING INDUSTRY

Entertainment engineering is the blend of spectacle and physics. Engineers use their knowledge of robotics, computer software, 3D printing, and mechanics to create interactive puppets, detailed virtual worlds, and realistic props that appear to be out of this world.

The job of an entertainment engineer is to bring to life the vision of the artistic team behind a project. Just like any engineer, their first responsibility is to ensure safety. “Events are oftentimes created by an artistic team or a creative director, and their vision is an elaborate and intricate idea. So often, the job of an entertainment engineer is to be that rational voice that creates a number of different solutions which fulfill the creative team’s vision that is safe and realistic,” said Michael Genova, associate professor of Entertainment Engineering and Design at the University of Nevada, Las Vegas.

Emerging technologies such as drones and augmented reality are now finding their way into the entertainment spaces. Here are four occupations within the entertainment space that engineers fill.

## X Animatronics Robotist

**Education:** Bachelor’s degree in robotics, mechanical, or electrical engineering

**Median salary:** \$75,270 per year

**Job description:** The job of an animatronics engineer requires the build and design of robots designed to look like animals, fictional creatures, or even human beings. Animatronics engineers generally work on movie sets, but their creations can also be found on stage or in theme parks.

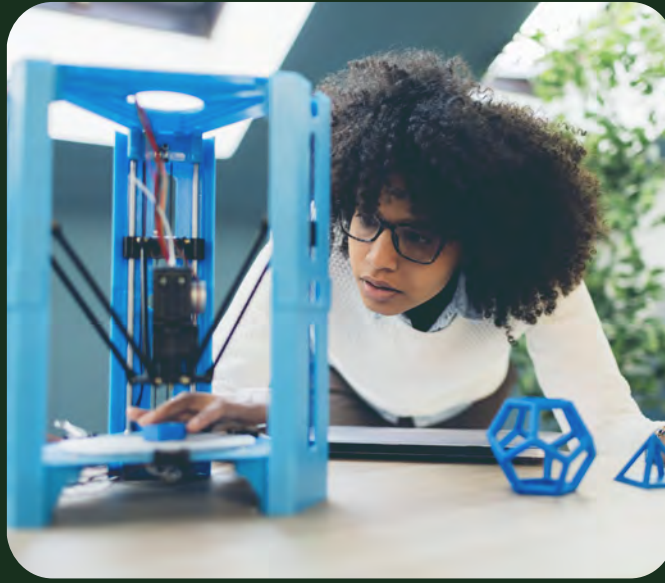


## X 3D Printing Designer

**Education:** Bachelor’s degree in mechanical engineering, design, computer science, or fine arts

**Median salary:** \$78,073 per year

**Job description:** 3D printing has changed how several props and costumes are manufactured within the film industry. Printing techniques such as SLS and polyjet printing, coupled with advanced computer modeling, print intricate details better than any machining process. 3D printing has been used to create Thor’s hammer Mjöllnir and dinosaur skulls for Jurassic Park World.



## X Drone Engineer

**Education:** Bachelor’s degree in aerospace, software development, or unmanned aircraft systems science

**Median salary:** \$79,685 per year

**Job description:** The unmanned aerial vehicle market is growing rapidly. Drones are being used for cinematography, aerial photography, mapping, modeling, and most recently, visual displays. The 2020 Olympics held in Japan featured an elaborate drone display depicting images of the world and the iconic Olympic rings. For future operators, a drone pilot license is required by the Federal Aviation Administration.



## X AR/VR Designer

**Education:** Bachelor’s degree in computer programming or software development

**Median salary:** \$98,268

**Job description:** Augmented reality (AR) alters a real-world environment by introducing computer-generated overlays, while virtual reality (VR) uses computer technology to create a virtual world that users can interact with. Both technologies are predominantly used in entertainment to develop new methods of interaction. AR is used on theme park rides so the user can interact with its environment. VR can create realistic virtual game surroundings. Engineers are also using AR/VR as preplanning tools for designing theme park attractions and stage productions.

