



STEM Career: Civil Engineer

By: Jennifer Lopez

My STEM Career

- The STEM career that appeals to me the most is being a civil engineer.
- A civil engineer is a person who plans, designs, constructs, maintains, and operates infrastructures while protecting public and environmental health. Civil engineers also work on improving infrastructures that have been neglected and unkept.
- Civil engineering deals with planning, designing and overseeing construction and maintenance of buildings and facilities such as roads, airports, bridges, harbors, dams, pipelines, water systems, power plants and sewage systems.



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Robotics Involvement

- Robotics are used in the construction industry to improve productivity, quality, working conditions, and skilled labor shortages. Taking a robotics class is helping me understand how to better use robots and how they work, preparing me for that career.



Preparations and Requirements

- The requirements in order to become a civil engineer, you need to receive a bachelor's degree. If you want a promotion to senior positions, you typically need a graduate degree and a license. If you want to provide services directly to the public civil engineers usually must be licensed but it can vary depending on the state.
- The steps you will need to take to become an engineer are first you need to earn a bachelor's degree on civil engineering. Then you need to complete a civil engineering internship. You need to then chose an area which you want to specialize in since this field includes many areas of work. In order to have the necessary qualifications you need to pass all the relevant exams for certification.
- The last step you need to take would be to try and get an entry level job to gain some work experience and try to move up from there.

The Future

- I believe that in the next ten years civil engineers will be using a lot more technology and some tasks normally done by younger engineers might start being done by artificial intelligence. I believe this might happen because large amounts of data collected from different projects can be processed by computers to use as a learning experience.
- Artificial intelligence can help making the difficult decisions that an engineer would usually have to make on a construction site. Doing this will result in massive improvements in the speed of the project delivery and it will also decrease the overall costs and carbon emissions.





Inspirations

- John Frank Stevens was a famous engineer from the United States that built the great northern railway in America and was chief engineer on the Panama Canal between 1905 and 1907.

Citations:

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