



# Shakthi Jayavelu

**B.S. in Chemical Engineering, Anna University- India (2011)**

**M.S. in Environmental Engineering (2013)**

**Triplepoint Environmental, Chicago, IL**

## **Describe your overall duties/ responsibilities as a Process Engineer:**

My work primarily involves Process design calculations to design wastewater treatment plants for municipal and industrial clients. To put it in simple words, I make sure microorganisms are happily fed in a tank with the right temperature, pH, and oxygen so they could reproduce and treat wastewater. The primary goal is to treat the pollutants in wastewater, so they do not cause any damage like algal blooms to the lakes where they are being discharged. In addition to regular projects, I manage the pilot plant programs in USA and Canada.

## **Explain the skills/abilities that are required for being successful in your role:**

Though there are many computer design programs, it is very important to know the basic equations that are behind these models. I find myself spending hours on the same equations and books that I learned in school to solve real-world problems. Typically, any new technology evolves from lab scale to pilot scale to full scale, so it is important to keep up with current trends in the latest treatment technology by reading academic papers.

## **What advice would you give to students who are considering majoring in Environmental Engineering?**

Environmental engineering is a wide field that allows you to work in air pollution, drinking, and wastewater treatment, Ultrapure water for semiconductor industries, Solid waste & remediation. Be open and take classes in different departments, sometimes the classes pertaining to these fields are offered in other departments such as the Department of Food, Agricultural and Biological Engineering, Chemical engineering & Environmental science. Though consulting is seen as the conventional career path for Environmental engineering graduates, there are various other options such as working with manufacturers that produce treatment systems, Environmental compliance manager for various industries ranging from Food & agriculture industry to steel plants to semi-conductor industry.

