

STEM Educator

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What does a STEM Educator do?

STEM Educators teach people about Science Technology Engineering and Maths; the types of activities you can do, the impact STEM has on the society and the careers that are open to those who are interested in STEM.



What do you work in and what is your specialty?

As a STEM Educator, I get to travel around to lots of schools and organisations, teaching teachers how to integrate STEM into their classrooms in fun and engaging ways. I also work with students, running workshops to use STEM topics to solve problems. My specialty is Robotics, and show both teachers and students that the construction and programming of a robot is not necessarily as difficult as most people would believe.

How did you become interested in this area and when did you first start?

As a kid, I had always been interested in how things work. I would take apart scrap electronics just to see what was inside (often I couldn't put them back together again!). I knew that I wanted to get into a field where things were being created and problems needed solving. While I was doing my university studies, I helped to start some Engineering outreach projects to show Primary and Secondary students how much fun (and educational) robotics could be, I enjoyed it so much that I continue doing it to this day.

What study path have you taken to get here?

After high school I went into a degree in Engineering at the University of Queensland. I wasn't sure which field I would eventually take so I did the general first year courses where you learn a little about all the Engineering disciplines (electrical, mechanical, civil, mining etc). After settling into Electrical Engineering I also took on a Mechatronics minor. Once I graduated with my undergraduate degree, I pursued my PhD with a project that looked at how the human cerebellum could be modeled and used as inspiration to build a humanoid robot that could learn how to walk.

What do you like most about your job?

I love the looks on teachers and students faces when I teach them something new about robotics or programming. I love that a light bulb goes off in their head when they realise that "they" can do it and it isn't as difficult as they thought it would be. I love it when students come running up to me to show me a robot that they have built, or an app they have programmed or a computer game they have created, all by themselves rather than just downloading or copying something that someone else has done.

Do you have any particular career highlights?

In my career I've been lucky to have traveled all around the world, working in some very interesting places. I've done some work for LEGO which allowed me a tour of the LEGO factory in Denmark, a truly amazing operation with lots of robots required to make everything run smoothly. I get emails from all over the world from people using my robot designs to run their robotics classes.

What advice would you give to someone interested in working in this area?

Never stop learning! There are new things in robots, programming languages and sensors being developed every day and while you'll never be able to become an expert in everything, you'll find out all these amazing things other people are doing which at one point in the future you'll hit a problem and think "Oh, I've seen someone else do something similar that I could use for my problem".