Why are female engineers needed?

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What inspired you to become an engineer?
My curiosity for medical image analysis was stimulated at Uppsala University in Sweden. I still remember the moment when I first saw a big screen of the 3D visualization model of the human foot at the Centre for Image Analysis. I was attracted by the visualized animation of the muscle, blood vessel and bone under the skin. I found imaging can be used to improve our health quality and make our life better.

After that, I was eager to know more about imaging in Computer Science. I selected all the courses provided by the Centre for Image Analysis during my masters studies. I love drawing and painting. When I was young, I wanted to be an artist. Now I work in biomedical image analysis. For me, medical imaging is another form of modern art. I love what I am doing.

What is your research area?
I work in biomedical image analysis, and specialize in machine learning and computer vision. Currently my research focuses on characterization of biventricular motion for cardiovascular disease diagnosis.

- Deep learning in cardiac MRI analysis
- Programming in Python using TensorFlow/PyTorch
- Cardiac motion tracking in MRI sequences
- Measurements of cardiac function

What's the best thing about your job?
Honing my technical and soft skills. Discovering new things. Learning more about the heart function and how to stay healthy.

What has been your proudest moment / highest achievement to date?
My proudest moment was my PhD thesis defence date. My parents were witnesses on that day. I have showed my research topic and outcome, and I have earned my PhD degree via hard work.

My highest achievement is acquiring skills after PhD training. These skills are not only for research but also for my daily life. When I meet a new problem, explore a new thing or live in a new environment, I know how to search for information, analyse and evaluate to find the solution, and achieve my goal.

What top tip would you give girls considering a career in Engineering?
- We can develop skills that are easily transferable. Engineering is not just for men.
- We can become smart and clever via learning necessary skills and absorbing knowledge.
- We can follow role models, see how they built their career path and get positive energy from them.
- Don’t be afraid to try something new.

What is an average day on the job like?
I work at the Institute of Biomedical Engineering located at the Old Road Campus. I am surrounded by very smart people there, and they inspire me for my research. Normally, I do programming, analyse data, read research papers and write my own research. I have regular meetings with my supervisor and colleagues.

How did you get started in engineering?
I obtained my bachelor and masters degrees in Computer Science. PhD in Biomedical Engineering with the Latin honours magna cum laude. Now I am a post-doctoral research assistant.

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What attributes and skills help you in your role?
- Independence
- Confidence
- Passion
- Self-improvement
- Bravery
- Teamwork
- Creativity

Why should young women choose engineering?

a) There are a huge variety of career opportunities in engineering.

b) In my field, we gain great benefit from coding. These skills will be the greatest treasures in our daily life. It teaches you problem-solving skills, critical and logical thinking, and patience.

c) Engineering can be a highly profitable career. It can give you freedom to enjoy life.

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