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DEPARTMENT OF
**ENGINEERING
SCIENCE**

What inspired you to become an engineer?

I was inspired to pursue a career in engineering science due to my strong interest towards the STEM subjects e.g. physics and mathematics since my childhood.

This was mainly because I grew up in a scientifically oriented family background. Through biomedical engineering, I feel motivated to utilize my technical and research skills towards advancements in medicine and healthcare and explore the latest trends in medical technology, which can directly benefit human health and life.



How did you get started in engineering?

I was selected for a bachelor in engineering in a women's government institution in India. During my bachelor I did a research internship on speech recognition at the Defense Research and Development Organization (DRDO), which was my first external research experience. During my master's degree at Indian Institute of Technology Roorkee, I achieved the opportunity to complete my dissertation at the Technical University Berlin, Germany via the German Academic Exchange Service (DAAD) Master Sandwich Scholarship.

I worked in a joint research project on digital pathology with Charité University Hospital, Berlin for a year, and also wrote my first journal publication. After my master in engineering, I worked as a full-time lecturer at an engineering institution in India for a year, before starting my PhD at the Technical University Berlin. The lectureship was an enriching experience as I taught undergraduate courses such as electronic circuits, devices, electrical machines and instruments by conducting lectures, tutorials and labs and supervising projects.

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What attributes and skills do you bring to your role?

I have an interdisciplinary background in biomedical, electronics, electrical and computer engineering.

Acquiring diverse technical skills has not only built me a core foundation in engineering, but also provided me the knowledge and research experience that makes me confident to solve a wide variety of problems.

Moreover, I have remained focussed and self-motivated in my different career stages, which have given positive results and helped me in my role.

What is an average day on the job like?

On an average day, I am engaged in research activities at the IBME such as developing novel computerized methods in medical ultrasound, reading research papers or writing about my research. I have regular discussions with my mentor and colleagues, and I co-supervise student projects in the research group. Occasionally, I am involved in teaching activities such as lectures, tutorials and lab demonstrations, and organising seminars and meetings.

What is your research area?

I am a postdoctoral researcher at the Institute of Biomedical Engineering. I specialize in computer vision and medical image analysis, and my current research focuses on image and video analysis in obstetric ultrasound using advanced computer vision and artificial intelligence methods. I am also interested in heterogeneous data analysis to develop novel computer-aided healthcare solutions using deep learning, image and signal processing, natural language processing and information fusion.

What has been highest achievement to date?

My doctoral degree “Dr.-Ing.”, awarded to me in 2017 at the Technical University of Berlin, is my highest achievement to date. The German title “Doktorin der Ingenieurwissenschaften” translates to “Doctor of Engineering”; this makes me feel very proud as an engineer. Also, being a woman in STEM and carving my own path in engineering, motivates me to contribute even more to scientific research and development.

Why should young women choose engineering?

I would like to encourage young women to consider the career path of engineering and contribute towards science and technology. From my personal experience, it is highly rewarding to become an engineer, as it has allowed me to explore my field in great depths via studying about technological advancements, gaining research skills, and finding solutions to real-world problems.

Have you experienced any gender-related challenges?

I haven't experienced any major gender-related challenges. Sometimes, in day-to-day life there may be instances, such as suggestions and opinions may be overlooked (which could be gender-related). But this is a subjective and varying phenomenon, and in such situations my thought process is to just ignore the biases and let action speak louder than words.

What's your top tip for girls considering engineering?

If you are really interested and fascinated by STEM subjects, then engineering would be an incredible career choice and the sky is the limit for future career opportunities whether in industry, academia or research. You need to be confident in what you do, and step out of your comfort zone to overcome any challenges; this would empower you to pursue even more than before.

“I am doing what I love the most: research and teaching in the field of engineering. The freedom and flexibility to perform these activities is what I really find satisfying.”