# Statement of Motivation

By developing computer games, line follower robots and repairing computers, I got overwhelmed with electronics and programming since my high-school days. I started being more interested in programming when I took a Robotics course in college. Therefore, I decided to make a career in the software industry.

After completing my under-graduation, I was selected in a product development company as a Software developer from the campus interview. I got the opportunity to work on Linux platform for the first time. So, I learned about Linux by reading books and watching tutorials. From that point onwards, I have kept on learning about new computer science concepts and technologies by myself. By working on real world projects in a team environment, I have gained valuable skills such as teamwork, planning and project management.

I have learned about core computer science subjects including Algorithms, Database systems, Data structures and Operating systems on my own. I frequently participate in online competitive programming contests on HackerRank to improve my programming skills. Also, I educate myself by taking different online courses on edx, coursera and udacity. I do freelancing in my spare time to apply my skills which I have gained from online courses into the real world projects.

I am quite fond of open source software development. I regularly contribute in open source projects hosted on GitHub with other contributors to make an impact in a large community. I attend technological meet-ups and events organize from meetup.com to update myself with the latest technologies. The renowned groups in which I go are as follows,

- Google Developer Groups

- Mozilla

- Python Express

I possess a high observation power. Therefore, I adapt to new things very quickly. I like solving challenging problems. The kind of problems that have not been solved before, that might not even appear to be problems at first sight. The kind of problems one learns to solve at research universities.

My research interest lies in **Embedded and Real-time systems**. I have recently developed a IoT project on Raspberry-Pi. In this project, I receive temperature and motion sensor data on Raspberry-Pi. Then I send this data over the cloud server using web services. On the server side, I process this data using machine learning algorithm and show real time graphs on a web-page. Programming is done using python. So, I am gaining new skills in machine learning and embedded systems by developing projects at my home in my spare time.

My long term goal is to become a **Research scientist** who researches and develops embedded softwares. My desire to find better and more efficient methods of powering our lives through embedded software has inspired me to study embedded systems. I have the professional work experience, the motivation and the zeal to pursue further education. I believe that University of TU Delft's graduate program in Embedded systems would be the best place for me to achieve my future goals.

I want to study at the TU Delft for a number of reasons; first and foremost is that there are potential supervisors whose research interests align well with my own. Secondly, the university offers research-enriched education and work-integrated learning opportunities. Lastly, the university provides a chance to participate in the community activities which I like to do. Thus, I will feel privileged to be a part of TU Delft university.

If there are optional specialisations in the MSc program of my choice then I would choose Data Science specialization because I like the combination of Mathematics and Computer science. I do machine learning online courses on Datacamp to upskill myself. Therefore, I would like to explore in this area in my graduate program.

**Hypothetical thesis projects:**

- Machine Learning Techniques in real-time embedded systems
  -I will explore about different machine learning algorithms/models which can optimize the performance, speed and energy in mobile embedded devices.

- Human Robot Interaction and Service Robotics
  -I will work on the integration of speech, language, vision and action. It will also include programming service robots, development of new application scenarios for sensor-based service robots.