# Motivation Letter

**Name: Hao Wu**

**GPA: 3.94/4.0**

**Ranking: 3/26**

**Application Major: Electronics and ICT Engineering Technology**

From the time that I was a high-school student, I started to be very interested in engineering, so I chose the Electronics Packaging (which is a sub-discipline of Electrical Engineering) as my undergraduate major, which has given me a lot of knowledge in electronic design and fabrication. I receive my Bachelor’s education at Huazhong University of Science and Technology, a top-ten “985” and “211” university in China. After serious consideration and careful self-examination, I decided to apply for Master of Electronics and ICT Engineering Technology at KU Leuven.

I have a very clear plan for my career. I enjoy the great convenience brought by smart electronic devices from my childhood, and it is my goal to work in smart electronic devices companies as a researcher in the future. During my undergraduate study, smart electronic devices have improved a lot. Many products are huge technical and business success. Thus, the renowned Electronics and ICT Engineering Technology Master program is ideal for me to get relevant professional training and be prepared to pursue my goal. It is equipped with the technology, expertise, and resources that I need to succeed in the future

I have got an average score of 89.6/100 at the end of the 6th semester and ranked third among 26 students in our major. I have already finished basic mathematical courses like Linear Algebra, Calculus, Complex Function and Integral Transform, and Probability and Mathematical Statistics, in which I scored the highest in my third semester (97/100). I also gained some skill in programming through Fundamental of Computer Programming (C++) as well and gained a score of 91/100 in that course. As for the Electronic knowledge, I have finished related courses like Electrical & Magnetic Circuits, Analogue Electronics, Fundamentals of Solid Electronics (including solid-state physics and semiconductor physics), Digital Circuit and Electronic Testing and Experiment Techniques, which enable me to operate electrical measurements and use Verilog to design digital system. During the study of the Foundation of Microelectronics, I have obtained the basic knowledge of semiconductor devices. Through the learning of Signal and System, I have acquired the knowledge of signal processing, and I got a score of 95/100 in this course. When I finished the project and examination of Principle of Microcomputer, I have gained a better understanding of the embedded electronic system and decided to learn more about this field, so I did well in this course and scored 94/100 in the end.

As for the project experience, an essential part of my college life is my experience in the Undergraduate Innovation Project, the undergraduate research project of HUST. I have participated in two projects, one of them is about the design of a high-speed data acquisition system for industrial testing equipment, we used Verilog and C++ to design a system that can fulfill the function of data acquisition and transmission in a very high speed, then we used Python to visualize data. Another is about the delay detection and improvement of electronic measurement system. Through this project, I learned the basic knowledge of grating scale and modern electronic system design. From these projects, I have gained a better understanding of electronic design and electrical measurement. What’s more, I also learned how to use Python to analyze and visualize experimental results, which is essential in data analysis in the industry. Through my project experience, I am very convinced that I am very interested in the field of electronic system design.

Nowadays, machine learning and deep learning have been applied to many kinds of technologies, including electronics, so I decided to learn about this field. I am engaging in the third project, which is about the convolutional neural network and YOLO algorithm. I need to solve the problem of weld positioning in industrial vision inspection. It has given me the basic knowledge of neural network and machine learning.

For my experience in the industry, I went to Shenzhen STS Microelectronics Company for an internship. During the practice, I have a chance to get a deeper understanding of the manufacturing process of an electronic product (distance sensor), which has given me a better understanding and understanding of the semiconductor device itself. Those highly automated and intelligent production equipment have also spurred my interest in intelligent electronic system design and ICT products.

I hope to join this Master’s program because I have been deeply attracted by the its abundant academic resources and career opportunities. I think I can become an excellent engineer through the study in Electronics and ICT Engineering Technology.

In all, with my previous courses, research experiences and ability, I am confident about joining this Master’s program in KU Leuven and being successful in this field. It will be great if I receive positive result.