

## SOP

As Andrew Ng, American computer scientist stated: “AI is the new Electricity”, and Demis Hassabis, founder and CEO of DeepMind said: “Solve Intelligence and then use Intelligence to solve everything else”, we can realize how important Artificial Intelligence or AI is for the future of human beings. I believe everyone deserves to pursue their dream and passion. In my case, that dream is to continue my studies in the field of computer science and AI.

To begin with, as a 17-year-old boy when I wanted to choose my major, I always had one clear vision which was becoming an engineer in the future. My passion for mathematics and physics led me to choose civil engineering before I became fond of computer science. After one semester and passing the computer programming course, I found out that it's better for me to change my major to computer science. Actually, I was so enthusiastic about computer science that I became a TA in that course. Due to conscription law, I had little choice but to have continued my current major. Therefore, I thought about the opportunity to study a double major but my university didn't have this option at that time.

It was the fifth semester of my bachelor's course when I realized that a deep understanding of computer science is what I wanted from now on. It sure was a psychological burden however, I keep my motivation high. By watching CS50 course from Harvard University on EDX, I attained a high level of comprehension and learned bits and bytes of the computer. Also, I saw Year Million from National Geographic about AI which was thrilling for me. It was like a mysterious black box for me and I felt I could do incredible stuff with it. More free research and a deeper understanding of computer science and AI led me to a bright and clear purpose, to learn more and more about them. This was my turning point where my enthusiasm for computer science and AI got together and I discovered a new horizon in my life. In the summer of 2017, I learned Python before starting Professor Andrew NG's machine learning course and went through it step by step, after finishing the course and its programming assignments I felt a sense of achievement for the first time.

In the last year of my education, I entered an innovation center named Startup House, where I worked with 3 various teams where I worked as an AI developer and backend web programmer and I experienced responsibility, teamwork and working under pressure. I continued my self-studies about computer science and AI by participating in online MOOCs including Algorithms and Data Structures at Stanford University and Deep Learning specialization on Coursera. I also audited some fundamental courses of computer science at my university, which led me to a higher level of proficiency in programming especially Python; thus, I gained technical background and skill set that were needed for my future research projects.

After graduation, I got involved in two separate research projects, one of them was about detecting cancerous tissues in pathological images and the other one was an analysis of human pose recognition from the first-person viewpoint. In my first project, I was responsible for developing a program for detecting cancer using convolutional neural networks. In the second project, I developed the sequence to sequence the LSTM part of the code. The outcome of these research projects were four research papers. Also, those experiences taught me how to research and turn my ideas to code and test them efficiently and I developed my teamwork skills too. Eventually, it was clear to me which specific area of research is exciting and I realized that I enjoyed the course as much as results.

My long-term goal is to continue my work as a research engineer who wants to push the boundaries of science. Also, my ultimate objective is being able to work on addressing the greatest challenges of mankind like Global Warming, Climate Change, Health Care and Education systems' deficiencies and finding the origin of intelligence. Therefore, graduate-level education is an indispensable part of my future path. All in all, I hope my overall past performance meets the expectation of the University of Liège and it would be an honor for me to get admission from this university, which could finally pay off 3 years of my endeavors and planning for this stage of my life.