

**POLYTECHNIQUE
MONTREAL**

WORLD-CLASS
ENGINEERING



Final Report

Institution name : RWTH Aachen

City : Aachen

State : North Rhine-Westphalia

Country : Germany

Internship semester : Summer 2018

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The aim of this document is to report my experience in the DAAD RISE Germany internship program of summer 2018. My internship took place in Aachen from the 28th of May till the 3rd of August. I was working in the research department of Psychiatry, Psychotherapy and Psychosomatics in the RWTH University Hospital under the supervision of a PhD student. I had the chance to work on a video game project aimed for a study. Being a student in engineering, I have been trying to find internships where I can learn and apply what I learned, not just on technical aspects but also on interpersonal relationship. I can say without any hesitation that my experience was more than satisfying on all those aspects. This internship provided a good environment for learning technical skills as well as interpersonal relationship skills and, gave me the opportunity to discover Germany.

The RWTH University in Aachen is the largest technical university in Germany and is well known for its engineering programs. The research department of Psychiatry, Psychotherapy and Psychosomatics is in the University Hospital (Klinikum). I worked there within the research group that had at the time a dozen of students doing their PhD or Master along with researchers and medical students helping with the different studies. Many of us were approximately in the same age group and coming from all around the world. Because of that, the working environment was dynamic. Every lunch time was a good occasion to catch up with the other students and exchange about each other's research but also, about our respective culture. Every week, we would have a meeting within the research group where the professor in charge would attend. Students would present updates on their work in formal or informal presentations. I was called a few times to present some updates on the game in informal presentations. I would prepare a few videos or pictures to show the progress I made.

As for the project I worked on, it was very motivating for several reasons. One of those reasons is that the video game I worked on will be used in a study my supervisor is conducting. Another reason is that I had previous experience in programming video games and wanted to continue acquiring skills in that field. At the beginning of the internship, my supervisor and I brainstormed to find the concept of the game. We had to define what I would have to implement during the 10 weeks. We decided to go for a firefighting simulator. I started from the codebase of another game they were already using. Since I was the only developer on the project, I was

in charge of implementing the whole game mode. My last video game project also lasted 10 weeks, but we were 4 developers who worked more than 40 hours/week each. At first, my assignment for the summer seemed like a huge task, but it ended up being fine because I started with a good codebase. Also, because I was the only developer on the project, I had to produce some work that is usually done by artists. It was a good challenge for me since I didn't have much previous experience in that matter. Luckily, I really like making art although my previous experience was mostly in visual art such as drawing and painting and not with computer art. Nevertheless, it wasn't too much trouble. Another big challenge was that the work entails also some video game designer task such as level design. Level design among other things requires to create and plan how the levels will be. I did a first layout that changed a few times over the weeks. We had a few playtest sessions organized on the 9th week. With the feedback from the players, we found a few things to change.

In conclusion, this internship was a good opportunity for me to continue my training in video game production. I gained experience in C++ coding and video game development with the Unreal Engine. I also gained experience with the artistic side of video game production. Working on that type of project by itself is very motivating. And in this internship, it is even more the case since the video game I made will be used in a study. It is at the same time a project that is really entertaining to work on and that requires a high software quality. I am very grateful to have been given this responsibility and I took it seriously. That is why I put the required effort and time to write high quality code. Furthermore, my previous experiences in coding video games helped me on that matter. I am very happy with what I accomplished during this internship and feel lucky to have been given that opportunity. I am also happy to have discovered Aachen, a beautiful city and more generally, Germany, in which I visited more than 15 cities. The skills I learned, the contribution I made and the connections I developed are all aspects that made this summer unforgettable.

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