

RISE 2017: Internship Report

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ABSTRACT

I spent three months on an internship in the Collective Information Processing Group within the Institute for Theoretical Biology within Humboldt University of Berlin. My supervisor was Pascal Klamser. My project involved using a convolutional neural network to detect, from videos, fish swimming on the surface of sulfur water. I wrote a program that takes the output of the neural network and connects the fish between the frames, trying to filter out poor quality detections by setting a minimum number of frames a fish has to be present in.

Do you have helpful tips on the Visa or residence permit application, opening a bank account, on traveling, on finding housing?

I did not need a Visa or residence permit as I have EU citizenship. I opened a bank account at N26 as they were very easy to use. It was done totally through an app on my phone which also alerted me when money was taken from my account. Everything was in English also which was very handy.

Traveling by plane was very easy into and across Germany was very easy. It was also easy to use the public transport around Berlin as the tickets were very flexible. I found housing through the website Uniplaces. It took some time to find this but it was very nice and convenient accommodation.

What is your impression of research in Germany?

I was very impressed with the research that's being done in Germany. In particular at my university, Humboldt University of Berlin, they were very engaged with other institutions which created a very nice open environment.

At the conference in Heidelberg, it was interesting to hear other interns talking about what they were working on during their internship. I was impressed with the wide range and the quality of the research being carried out across the country.

What is your impression of German universities?

At my university the staff and students were very welcoming and friendly. The people in my group brought me along to lunch every day and also introduced me to their colleagues in other departments and institutions. I really liked the setting where I was working. It was within a campus in the centre of Berlin surrounded by green areas.

What did you find particularly interesting about your research?

My project involved using a convolutional neural network to detect, from videos, fish swimming on the surface of sulfur water.

I found it really interesting how a neural network works and also how widely used they are in the field of biology.

It is really incredible how techniques like the ones I used can really increase the amount of data that can be processed. This therefore leads to learning much more interesting things and much more quickly.

Describe a typical day of your internship.

I would start at around 8:00. I'd do some initial planning for the day ahead in terms of what I'd be focusing on. I would then get to work programming. I'd also do tasks involving analysing graphs and interpreting images to track the progress of my work. My supervisor had a desk opposite and was always available to ask questions and work out problems together on the whiteboard.

We usually all go for lunch at around 13:00 in the nearby canteen. There we discuss work and non-work related things with the research group and their collaborators from different groups and universities.

There were usually various meetings throughout the week at 14:00. These were meetings of the entire research institute as well as meetings for individual projects that our group were working on.

I would then work some more from 15:00 to around 17:00.

Highlights of your stay (both personal and academic).

The main highlight was being able to experience research being done across a wide range of subjects, all coming together to achieve a common goal. It was also extremely beneficial to be able to experience what it is actually like to do a Masters or a PhD.

It was also great to be able to explore a different country and learn more about a new place. Berlin was a very interesting place to explore with many things to do.

What is your impression of Germany in general?

I found Germany to be a very interesting place with lots of interesting history to explore. The people seemed very friendly but I wish in Berlin it could have been easier to learn more of the German language. However it did make living there easier knowing that English was widely used.

Overall I was very impressed by Berlin and Germany, and I would certainly strongly consider returning in the future to carry out postgraduate research.

“I agree that my report and accompanying pictures may be used by the DAAD in printed materials, presentations, and on websites in order to inform funding organisations, sponsors, and students about the RISE program.”