



STEUBEN-SCHURZ-GESELLSCHAFT E.V.

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## A Summer at Siemens Internship in an „awsome country”

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Ever since Simon Peterson arrived at the University of Minnesota to study Computer Sciences, he had always dreamed of working as an engineer in Germany. He booked an appointment with the CSE study abroad advisor and she told him about the USA-interns Program through the Steuben-Schurz Gesellschaft.

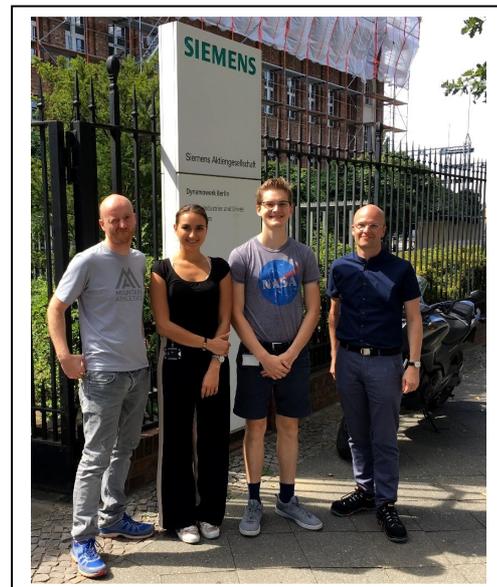
Simon applied for the program in October 2018 and had an interview with his future boss in November – he would be working in Berlin for the summer! Simon was incredibly excited – the spring semester seemed to drag on forever, as he says. Three days after his finals, he hopped on an airplane bound for Berlin.

I arrived in Berlin on the 17th of May in a jetlagged yet euphoric state. After I had gotten to my *Wohngemeinschaft* that I had found through *WG-Gesucht*, gotten unpacked, and played a game of cards with my landlord, I went to bed and had a well-earned rest. The first weekend I spent exploring Berlin and the stereotypical tourist highlights – the *Reichstag*, the *Brandenburger Tor*, and *Treptower Park* among others. Besides the beauty of the city, what popped out to me was how easy it was to get around the city on public transit. If it wasn't the S-Bahn or the U-Bahn, busses would bring me easily from point A to point B inside of Berlin, without a car.

From an American perspective it was simply incredible – being able to get around so easily without a car was something completely foreign to me. What also jumped out to me were the *Fahradwege*. Along pretty much every street in Germany there are bike paths in both directions,

with lights and intersection markings specifically for the bicyclists. I found both the bicycle infrastructure and culture, i.e. that biking to work was the norm as opposed to the exception- incredibly cool.

After a weekend of becoming acclimated to Berlin, including an appointment at the *Einwohnermeldeamt* to register my apartment and a visit to the *Ausländersbehörde* to obtain my *Aufenthaltserlaubnis*, I started my internship on Tuesday the 22nd of May. I showed up to the *Siemens Dynamowerk* in *Siemensstadt* with little idea of what to expect. My boss met me at the entrance and showed me the office. I immediately noticed the open floor plan and how everybody cheerily greeted me.



My coworkers and I (2<sup>nd</sup> from right) at Siemens in Berlin

I had my own desk, my own computer, and even got my own *Kappe* (Hard Hat) and *Sicherheitsschuhe* (safety shoes). I felt like I had a lot to learn! During the first week I went and got my *Ausweis* (I.D. Card), was shown the *Kantine* (cafeteria), and got a tour of the factory floor. It was very cool to be so close to the products that I was helping design.

The *Dynamowerk* had both *Fertigung* (production) and *Engineering*, with the engineering being on the edges of the factory. This meant that in order to get to meetings in other engineering offices, I had to do my *Kappe* and *Sicherheitsschuhe* and take a stroll through the factory floor. It was very cool to be so close to the products that I was helping design.

My main responsibilities at Siemens had to do with Simulation software for cooling systems for huge generators. At the *Dynamowerk Siemens* builds and engineers some of the largest drives in the world- they are used in Hydro plants, natural gas facilities, and steel mills, among others. When the current is either sent through the copper windings (in the case of a drive) or generated in the

copper windings (in the case of a generator), unwanted heat is created in the windings that must be removed in order to ensure proper operation and extend the lifespan of the machine. There are many different cooling systems utilizing air-to-air, water-to-air, air-to-water, etc. cooling types with different fans axial, radial, or fans mounted on the outside. Using the Modelica programming language for simulating systems, at Siemens we built software to simulate the cooling of the drives using varying cooling methods. This software allowed other engineers to plug in the dimensions of the machine they had designed to see how the cooling system and the respective drive would function. I was tasked with adding new fan types to the program, debugging the code, and organizing and documenting the results of tests using our program.

Outside of work I was able to experience the beautiful city of Berlin. With my German skills I was able to buy my bread from a baker and my groceries from a combination of farmers markets and Turkish grocery stores. I would spend my evenings cooking, running, biking, or meeting up with people in Berlin. It was easy to find meet up groups online! Beyond Berlin I also biked to Poland (110 km), took the train to Frankfurt to take part in the **Steuben-Schurz-Gesellschaft** summer interns event, and even was able to take a backpacking trip in the *Sächsische Schweiz*. I also managed to make it to the actually *Schweiz* (Switzerland) in a short excursion to Basel. I couldn't understand a word of *Schweizerdetusch*! It was an overall amazing summer and I learned so incredibly much- both at my job and in my free time exploring Germany. My German improved drastically and I cannot wait to return to this awesome country!

Redaktion: SSG-USA Interns

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Exploring the *Sächsische Schweiz* –  
in the middle and on the top of the *Nationalpark*



Report on SSG-online: <http://www.steuben-schurz.org/usainterns/forum/forum.htm>

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