

## **DAAD RISE Professional Final Report**

### **Christopher Womack**

First and foremost, I would like to thank the DAAD RISE Professional program for sponsoring my time in Germany. Without this program, I would not have had the opportunity to participate in an internship in Germany, and I was extremely thankful to be selected for this program.

My internship saw me working closely with a postdoctoral researcher in the Theoretical Physics department of GSI. This past year, the team developed a new theory for how some of the heavier elements in the universe are produced to try and account for the discrepancies between current theories and observations. The goal of my research project was then to perform a sensitivity analysis of the code they developed to run these simulations.

I was given the freedom to choose how I wanted to complete this goal, and I chose to work primarily in python as most of my MIT coursework has involved some amount of python programming. I spent the bulk of my summer writing, debugging, and unit testing my code to ensure that it was robust to any scenario a user could throw at it. I was able to complete my tasks ahead of schedule, and added on some additional parameters to my sensitivity analysis. My internship ended with a presentation to the program leadership and the rest of my department.

One big change from the norm was that I was the only American in my group; I had never experienced this even through my other internship abroad during my undergraduate degree. The only Americans at GSI were interns and there were only 5 out of the roughly 1,500 employees. This afforded me the opportunity to learn a lot about different cultural norms and styles of communication, outside of the American-centric view. The workplace was incredibly diverse, and I always felt welcome among my peers from Germany, France, India, Pakistan, China, and South Africa (to name a few countries).

GSI had a fairly robust intern program in addition to the DAAD RISE Professional interns, hosting events every other week for the interns to get to know each other, which was a nice touch. I was very fortunate to meet some amazing people during my time at GSI, and I am going to miss them greatly. During my first week, I made friends with a group of young Ph.D. students and spent the better part of the summer with them exploring Darmstadt, playing sports, and of course, finding the best Biergarten in town for an after-work Radler!

Germany is a beautiful country and it was honestly just so much fun to bounce back and forth between conducting cutting-edge research at a world-class research institute during the work day and exploring as much as I could after-hours. Overall, this experience showed me how adaptable I am and how quickly I can learn and integrate into a new place. I will be taking many soft skills back with me as well, (e.g. knowing when and how to ask for help) as I am starting a research project in a completely new field in the fall. I look forward to seeing how I can leverage this to help with my Ph.D. research (and more!).

*"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 organizations, sponsors, and students about the RISE program."*