

Anomaly Detection in Smart Grids using Deep Generative Models

Personal Account

The following text should provide an account about the conduct of a Marshall Plan Scholarship (MPS) project, carried out by Sebastian Schernthaner. This project also served as the basis for a master thesis. The host university was the Fachhochschule Salzburg (FHS), the Bowling Green State University (BGSU) acted as the guest university.

Right at the application for the MPS, it became apparent that because of the impending Covid-19 pandemic, it would become very difficult to travel to the USA. Therefore, we decided that the project would be conducted in Austria, with supervision from Professor Robert Green II from BGSU. In our first meeting, we agreed on a bi-weekly-meeting schedule to discuss the progress of the project. During these meetings, the project, as well as the problem domain of the project were discussed. The first phase of the project consisted of a thorough background-research that served as the basis for the initial proposal of an approach to the problem. This phase also included a discussion with a PhD-Student of BGSU, who gave me great insight and different view on the problem. The second phase, which consisted of the implementation of the beforementioned approach, started around mid-semester. In this phase, the meetings revolved around practical approaches, as well problem solving. Here, Prof. Green has been a tremendous help with his experience of the subject. He also provided me with the access to resource of the BGSU, which helped the progress of the project. In the application phase, I've set the deadline for the project to the end of June. Would I've been able to conduct the project on site, I believe that I'd have been able to meet this deadline. However, since I've stayed in Austria and took on a part-time job, I was only able to finish the implementation, but not its documentation in its entirety. Still, I was able to finish the documentation and hand in my master thesis on time.

In summary, I can only recommend the BGSU, especially Prof. Green, for future projects. Even with the distance, he provided excellent counsel and was essential for the completion of this project. I may have not been able to travel abroad, however, I think that the experience of working with a foreign university has helped broaden my horizon. I've always found it beneficial to be able to see things from a different direction and the collaboration with the BGSU has helped me with exactly that.

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