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**My time at the Technical University of Dresden (TUD) for student exchange program**

**(27<sup>th</sup> September, 2018 to 12<sup>th</sup> January, 2019)**

### **1. Arrival**

I arrived in Dresden in the evening of 27<sup>th</sup> September, 2019 and we were well received by our hosts at the main station (Hauptbahnhof). The journey was enjoyable and I didn't face any challenges along the way. We also successfully registered with the city offices for our stay.

### **2. Accommodation**

I stayed at the international guest house and I enjoyed every day I spent there. The services were good and the staff was so friendly and ready to help us anytime.

### **3. Work and classes**

I was able to attend two courses namely Machine Learning 2 and Computer Vision 1. I chose these courses because they are directly touching the areas of research that I am expecting to undertake for my PhD. I didn't have any prior knowledge to any of the courses and I can say that I learned a lot even though I missed out on machine learning 1. The lecturer for both of the courses, Dr. Guthier, was fantastic and easily understandable. He spoke very clear English and was so friendly, I even got some time to discuss with him about my research interests and he gave me some invaluable inputs.

Apart from classes me and my colleagues were also involved in several activities of the DAMOC project and pay visit to some companies and got to learn some things about the power sector in German. One the companies that we visited was called DREWAG, which is concerned with the generation and distribution of electric power around the city of Dresden. One interesting thing that I learnt during this visit was how the steam generation and distribution was done around houses in the city.



Figure-1: Steam chambers at DREWAG

We also visited KIWI|GRID, a company concerned with energy management and smart metering systems (fig 2). Founded by energy transition enthusiasts, KIWI|GRID envisions on a sustainable energy world by developing and operating cutting-edge internet of things (IoT) platforms. Their belief is to have a world which runs on 100% sustainable energy.

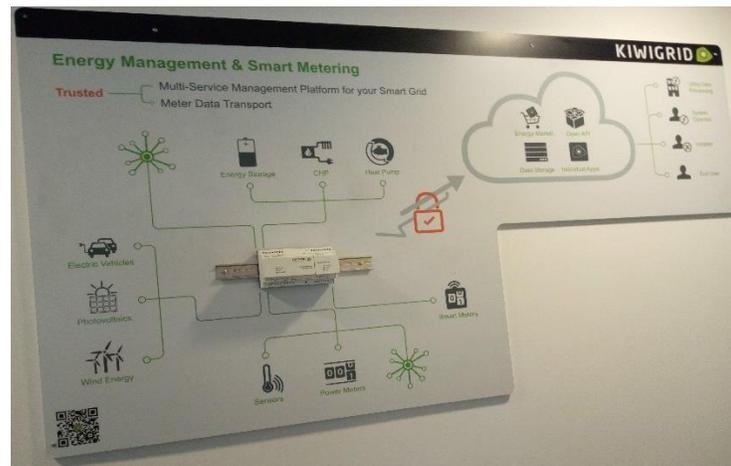


Figure -2: Energy Management and smart metering at KIWI|GRID

Throughout our time, I and my colleagues were also working on a report titled “Overview of Privacy and Security of Smart Grids, a Case of Tanzania and South Africa”. We did several draft of the report under the guidance of the team from TUD on our regular progress meetings. We submitted our supposedly last version of the report to the DAMOC group at TUD and we expect we will get a chance to present it in one of the upcoming conferences and finally publish it.

#### 4. Free time and social life

I enjoyed a lot of different activities in my free time and also get to learn some German culture through the food and visiting different historical places like the uranium and silver mines. One of the activities I enjoyed most is ice skating. Doing it for the very first, it was scary in the beginning but got used to it and it was really an adventure worthy trying. I also went hiking twice through the Saxon Switzerland landscapes and experienced some really nice mountain structures over there. Some other time I and my colleagues were shopping around different malls and trying some German food and drinks on the way.



*Figure-3: The Bastei Bridge, Saxony*



*Figure 4: Uranium Mines, Annaberg-Buchholz*

I also got a chance to attend the international Christmas party which was organized by the TU international office, where I enjoyed food from different nations and got to learn different cultures through dances and stories.

#### 5. Conclusion

Generally this exchange programme has been very useful to me in many aspects. The courses that I attended and the consultation I had with Dr. Guthier have set up the foundation on which my PhD journey will be built on. I am grateful for the chance and my sincere gratitude goes out to everyone in the DAMOC team from both Nelson Mandela African Institution of Science and Technology and Technical University of Dresden.