

ERFAHRUNGSBERICHT ÜBER STUDIENERFAHRUNGEN IN BAYERN

[Report on study experiences in Bavaria]

Herkunftsland [county of origin]:	Slovakia
Studium in Bayern [program in Bavaria]:	von [from] 10.2019 bis [until] 03.2023
Hochschule in Bayern [university in Bavaria]:	Technische Universität München
Studienfach [subject of study]:	Mathematics
Abschluss [degree]:	Master

The BAYHOST scholarship has enabled me to come and study in Bavaria. Without this opportunity, I would not be able to go and experience what I experienced and overall be what I am now. BAYHOST provided me not only with financial support, but also with experiences, friends and nice memories. Every year they organized an interesting **seminar for all scholarship holders**. During my first year in this program, we all went to Augsburg for a weekend. Every year's seminar had a specific topic, to which we had a discussion, listened to presentations and participated in various workshops. During workshops, we worked in teams, and therefore, were able to get to know other people. Besides this "working/studying" part, we went for a city tour, and I have to tell, that Augsburg is full of historical architecture and a very beautiful, pleasant city. Within the whole time, we were supplied with lots of tasty food, had several coffee breaks or went to a restaurant for dinner. At the end of the day, we had free time, and all went to a local bar, drank, talked and had fun. In the end, it felt so sad to go back home, because there I met a lot of nice and clever people, and with a few of them I became real friends and am friends also until now. Unfortunately, the remaining years the seminar was, due to COVID, online. Despite the fact that we enjoyed it anyway and was very well organized, it was not the same as live. But, the situation was as it was, there was no other option.

Let's now focus on the not BAYHOST related part. In this report, I will summarize my stay in Bavaria, the organizational steps I needed to do before and at the beginning of my stay, as well as my academic experience.

Before coming to Germany

When I found out that I am accepted both by Technical University of Munich and also by BAYHOST organization, I was very excited, but at the same time I knew it would require a lot of preparation and bureaucracy. And it was as I expected. Fortunately, since I am from the EU, it was not as bad as probably for other students from non-EU countries. I did not have to apply for a visa, nor to fulfil other requirements to come to Germany.

Regarding the university requirements, the only things I remember that I had to do were to pay the tuition fees and to send a confirmation about my health insurance. The process was quite easy, although at the beginning it did not seem like that. I had to find a health insurance company that would prove that I am insured, so I found AOK, asked them for a form, filled it and sent it together with my European insurance card. Quite quickly, I got the confirmation that I then sent to the university.

Another thing, and maybe the most important one, was to find accommodation there. I have to tell, that this is a topic itself and deserves its own report. There is a huge demand and not that big an offer in Munich. Huge prices and many scams add additional problems to it. I started to search for accommodation 3 months in advance, so some time in July. My boyfriend and I wanted to live together, so I searched for a one or two room apartment for two people. I added requests to and searched through various channels, facebook groups with accommodation, WGgesucht, immowelt, immoscout and so on. Many times I even did not get

any reply and when I got we needed to decide quickly, because someone else would be quicker and take the room/apartment. But once when requesting one not furnished apartment on immoscout, the guy replied that the apartment was already booked but he could offer me an apartment in student Campus Viva. It was one room with a bunk bed, its own kitchen and bathroom. We wanted to take a look at it, so we went on a one day trip from Slovakia to Germany just to see the apartment. It was nice and good, and REAL, and as we knew how hard it is to find something, we decided to take it. He required from us our IDs, certificate of enrolment (because only students could live there) and proof that our parents earn a sufficient amount of money, and that we could afford living there. In the end, the BAYHOST certificate for the scholarship was enough for him and we didn't have to provide him with anything else. All this happened in August and then sometime in September we sent the deposit and in the middle of October started to live there. Since it takes "only" 5 hours from Slovakia to come to Munich, we brought almost all of our stuff by car. I almost forgot to mention that there is also a dormitory option, but the queue is so huge that one obtains a room in the third or fourth semester. I got mine at the beginning of fifth semester and since I knew I would soon not need it anymore I did not accept it and stayed in the Campus Viva. It was similar to dorms, since there were many students; the Campus had its own common areas with table football, a learning room, a laundry room, and a small fitness room. What more could one ask for?

Beginnings

After my arrival to Munich, there were still few preparational things to do. We obtained our student card in the main TUM building in the city centre during the first week. With the card or our student number, we could buy a semester ticket for travelling in the whole Munich net. The ticket was for half a year and cost at that time around 200 euros. Without that semester ticket, one could use the public transportation just with the student card itself but only throughout weekends, holidays and off-peak hours and thus 18:00 evening - 6:00 morning. Since my university department and all lectures were in Garching and we lived next to the Olympia-park, I needed the semester ticket. Even though the university was in Garching and not in Munich, the commuting was not that bad, usually 35 minutes from door to door.

At the beginning of school, there were many introductory events where we could meet our new school-mates and get to know the exam regulations, information about the courses and also we introduced ourselves to others. Moreover, one could sign up for the buddy program, in which to every registered new student an older student was allocated. We could ask him/her any question about living in Munich, about the courses, exams, simply anything we were interested in. We also met them during one event in a bar, specially created to get to know our buddies.

Likewise, during the first days, it was necessary to register our new address in the bureau. In Munich, the office is called *Kreisverwaltungsreferat*, shortly KVR. The needed documents were ID, filled registration form and confirmation from the property owner that you live there. The process was quite simple, just to come there, hand in documents and then one get the confirmation. After registering, one usually gets a letter that it is mandatory to pay the radio broadcasting fees. Not paying the fee might result into problems; especially when one want to stay in Munich in the future, so I really recommend paying it.

During my stay in Munich

Munich is a very beautiful city and I would say it could offer anything one can think of. It has many big and nice parks to have a rest in, cinemas, theatres, shopping centres, bier gardens and sport facilities. Whole Munich is intertwined with cycling paths and one can use a bike even when travelling to school. Moreover, there are many restaurants, with lot of tasty and traditional Bavarian dishes. The city center and the surrounding of Munich is very suitable for sight-seeing and one day trips, e.g. to see lakes, Neuschwanstein castle, Augsburg or Bavarian Alps.

Regarding the sports, TUM offers through ZHS (Zentraler Hochschulsport Muenchen) various sport possibilities for very cheap prices. For example, during my first semester I bought for 15 euros a "swimming

class" and could go swimming to the swimming pool in Olympia Park any day during the restricted time whole semester. It was great! Except of swimming, they offer any kind of team sport, dances, Zumba, climbing, etc.

Munich itself is not a cheap city, especially in terms of accommodation. The food is comparable to other European countries and one can eat in university cafeteria (Mensa) for reasonable prices. It is even possible to pay with the student card after charging it with money. Not only cafeterias can be found at the university, but also lot of cafes. All in all, accommodation, food, travelling and free time, the cost of living is somewhere between 700-1000 euros monthly.

Student life is an exciting part of the life, as one can meet many new people. Not only during the teamwork at school but also during our free time we were spending the time with them. Lunch meetings, barbecues, parties, visiting winter markets and many other possibilities to hang out. Unfortunately, the COVID times worsened the connections and many people left back to their countries, but fortunately, we stayed in contact online.

Academic experience

Technical University of Munich was a very good choice. I decided to study program Mathematics, about which I will write later. But generally, in university buildings there are modern rooms all well-equipped. In the campus, one can found not only libraries but also few learning rooms, where it is very convenient to study. In the Mathematics and Informatics part of TUM, the building possesses a very interesting and unusual thing, 2 slides. They go from the third to zero floor and whoever can use it, one just needs to take a mat from the ones that are freely offered there. We had fun on it many times, besides we competed with each other.

Regarding the Mathematics program, I really like that the program is very free. There are 6 main modules that are from mathematics field, such as statistics, algebra, analysis, etc. Aside from that, there is a group of courses with applied math or the groups with minors, such as informatics, economic courses, etc. In order to fulfil the program, one has to complete either at least 9 ECTS from 4 modules or 30 ECTS from one module, and complete the rest with other courses. Since I am oriented to statistics and machine learning, I completed many courses from statistics module. The best part was that I could then choose also many courses from informatics part to improve my programming skills. Therefore, at the end I attended only course that I was interested in and that exactly belonged to my orientation in this field. And in this the freedom lies.

There was really a huge amount of offered courses; I have broadened my knowledge for example in these: Generalized Linear Models, Multivariate Statistics, Quantitative Risk Management, Machine Learning, Deep Learning, Data Analysis and Visualization in R and many others. The courses are really applied and one can use the knowledge obtained from them in the future career. Not only in the applied courses or also in more theoretical ones, the application could be seen and most of the times we also tried to apply it during the course on some data, for example.

Apart from the courses from the field, one needs to attend interdisciplinary course and seminar. There is a wide range of courses offered among which there are languages. I attended a German course to better fit there and in every other year I continued in learning it. The Seminar was meant to prepare us for doing a master thesis. It was first kind of research work we had to do and I enjoyed it a lot. My topic was: Group Testing for Infectious Diseases. We studied scientific papers and then gave a presentation about them. It was really new and interesting experience and I could try this way a little bit of research.

During my studies, I became also a teaching assistant to a professor with whom I was doing a master thesis. My responsibilities were to help with the exercises to Generalized Linear Models course. It was a great

experience and I really enjoyed doing it. I even more broadened my knowledge in the course since I needed to explain the things to other students and be ready to discuss the topic with them.

Regarding the master thesis, there are two options, either to do it at the department with a professor or in a company during internship. I chose the first option and I am happy about that. I could build a relationship with a professor and PhD student in the statistics department, could get to know more about their research and be involved in weekly seminars about various research topics. Next to it, I could dive deep into my thesis topic and could learn how to properly use the learnt methods.

The last thing, one has to do in order to complete the program, is to have either internship in a company or to do small guided research in a department. Since my master thesis has been done in the department I decided to do the internship in a company. That is what I am currently doing now. I have started an internship in UNIQA insurance company in Vienna, Austria. I am in the Data management group lead by data science expert. Presently I am involved in one use case, analysing insurance data sets and thanks to the courses, I am able to apply the knowledge to real problems.

Overall, the stay and study in Bavaria was a very enriching experience and I would not change anything from it. I have extended my knowledge by attending many interesting and useful courses, got the taste of research when doing the seminar and master thesis, felt the company life during my current internship and tried a small teaching. It all gave my strong ground for my future career. It has pushed me more into the direction of statistics and machine learning and I can see many opportunities to work in this field either in a company or in a research area.

Plans and activities after the BAYHOST-funding

As mentioned before, I am currently doing my internship. My short-term plan is to try one or two more internships in other companies/research institutes in other areas of statistics and machine learning, to find out what suits me the best. After that I will decide where to pursue my full time work, whether in a company or as a PhD student.

I would like to thank BAYHOST once more for having chosen me for the scholarship program and given me this opportunity. It was very nice to spend time with you and I hope to see you again in the future.