ERFAHRUNGSBERICHT ÜBER STUDIENERFAHRUNGEN IN BAYERN

[Report on study experiences in Bavaria]

Herkunftsland [county of origin]:	Rumänien
Studium in Bayern [program in Bavaria]:	von [from] 2021 bis [until] 2024
Hochschule in Bayern [university in Bavaria]:	LMU München
Studienfach [subject of study]:	Theoretical Physics
Abschluss [degree]:	Master

Preparation of the stay and arrival at the place of study

After being accepted into the master's program in Theoretical Physics (TMP) offered by the two prestigious Munich universities, Ludwig Maximilians Universität (LMU) and Technische Universität München (TUM), I began searching for long-term accommodation within the city. It quickly became clear that finding a place to stay would realistically require more than a month of continuous searching and messaging on various online platforms, where both private individuals and real-estate companies post listings daily. The best advice I received from someone who successfully found housing this way was simply to be persistent. Applying for apartments from abroad (I was still in my home country) made the process even more challenging, as landlords often required an in-person viewing within just a few days of their initial response. This led me to fly to Munich and book a hotel for an entire week while continuing to apply to every listing I found. After about four days in Munich, I finally secured a room in a private student dorm. Once I was settled, I completed the registration process at the university, obtained my student ID card, and concluded my enrolment. This administrative part was smooth compared to finding housing.

Stay at the place of study

Once I became a fully enrolled student, I began attending university-organized events and quickly met new people, as Munich is almost always bustling with students. I soon connected with others in my program, as the coordinator had organized several get-to-know-each-other meetings. Having all gone through similar challenges in finding housing in such a large city, it was easy to bond.

It's worth noting that Munich is an expensive city, and this should not be underestimated. Based on my experience, unless one finds a very affordable room in a shared house or apartment, the cost of living for an average student is unlikely to fall below 800 euros per month. Compared to other Bavarian university towns, there is a significant gap in student expenses. Fortunately, thanks to BAYHOST funding, I was able to focus solely on my studies without needing to look for additional jobs. The semester fee does not fully cover transportation; there are restrictions on public transport usage times, requiring students to purchase additional subscriptions to the local network. However, the introduction of the Deutschlandticket has almost completely solved this issue for Munich students.

Despite the high cost of rent, Munich offers numerous affordable activities for students. LMU and TUM students, for example, can take advantage of the sports infrastructure at Zentraler Hochschulsport München (ZHS) in Olympiapark, where the 1972 Olympic Games took place, and the TUM sports centre. These facilities offer a wide variety of sports, from swimming and volleyball to baseball and badminton.

Moreover, with so many young people in the city, there is something for every interest. For instance, I discovered a weekly chess night for amateurs in a lovely café near the city centre. During my first few months in Munich, attending this event and chatting with fellow chess enthusiasts was definitely enjoyable. Bouldering, or indoor climbing, is another popular activity among the students I've met.

Academic experiences and further qualifications

The three years (six semesters) that I spent as a master's student in Munich were both challenging and rewarding. I completed the exam-based requirements for graduation within four semesters, earning a total of 75 ECTS credits. I aimed to broaden my knowledge by taking a diverse range of courses, from Mathematics, such as Differentiable Manifolds, Mathematical Statistical Physics, and Partial Differential Equations, to Physics courses like Thermodynamics of Equilibrium Processes, General Relativity, and Quantum Information, and even further into fields like Information Theory and Deep Learning for Physicists. To complete the picture, I have also attended German classes each semester, along with attending talks on the philosophy of physics.

The remaining credit points are accounted for by the master's thesis, a project expected to take between 10 and 12 months. After considering the direction I wanted to pursue, I chose to complete my final project within the Data Science group of the Attoworld collaboration, a joint project between multiple institutions, directed by the 2023 Nobel-Prize-in-Physics laureate, Professor Ferenc Krausz. My project focused on the concept of Domain Adaptation, which addresses the issue of performance degradation in Machine Learning (ML) algorithms when the distributions of the training and test datasets differ significantly. This topic allowed me to delve into both the theoretical underpinnings of ML and the practical implementation of algorithms from the literature. Working under two supervisors with different backgrounds further enriched the experience, allowing me to apply the theoretical skills I gained through the program and acquire practical data science abilities.

None of the opportunities described above would have become a reality if I hadn't chosen to study in Bavaria. The master's program I completed, part of the Elite Network of Bavaria, is one of the best in the world. The experience I gained through interactions with the professors here has equipped me to face any professional challenge I may encounter in my future scientific career.

Overall, my time in Bavaria has had an irreversible impact on my life. Beyond the academic enrichment, living far from my family for the first time taught me the value of discipline and highlighted the importance of nurturing and supporting relationships. Experiencing such a rich culture at a young age has been decisive in helping me become a more mature and responsible person.

Plans or activities after BAYHOST funding

In the short term, I aim to complete my academic training by pursuing a PhD in a field related to my thesis research, specifically one focused on applied Machine Learning. Therefore, I have already started applying for several positions in Munich, both at the university and at different companies. I am confident that my training as a theoretical physicist will prove to be beneficial in this regard.

Once I finish my doctoral studies, I hope to follow in the footsteps of my parents and become a university professor. They have been my role model for as long as I remember and my dream is to become at least as skilled as they are. To this end, I strongly believe that my training in Bavaria will make it reality.