



Project Study: Advanced implementation of a mobility online tool to increase sustainable mobility behavior

Discription

As part of the interdisciplinary research project MCube (Munich Cluster for the Future of Mobility in Metropolitan Regions) we are involved in the development of an online tool for calculating the external costs (i.e., pollution, noise, accidents) of different transportation modes. The aim of the project is to increase awareness of the “true costs” for different transportation modes and facilitate environmental mobility choices. The online tool will calculate and display the monetary external costs for a chosen route and transportation mode. In addition, external costs are summarized on a Nutri-Score-like scale (ranging from A = very low external costs to E = very high external costs) to nudge users toward better, more environmental choices. Figure 1 shows a screenshot of the proposed design.

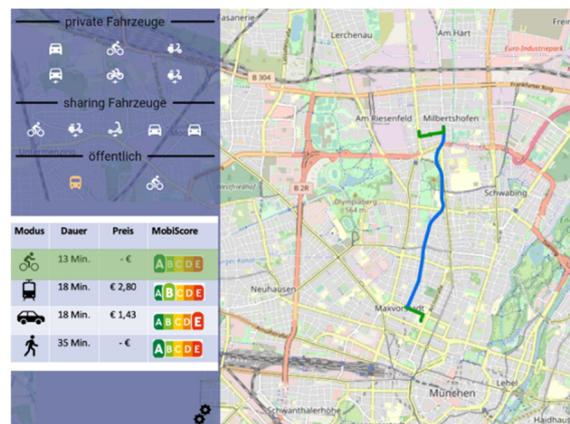


Figure 1: Proposed design of the Mobility Cost Calculator

Task

In this project study, you will develop a server application with a frontend to access it. The cost calculation algorithms have already been developed. Your task will be to implement the tool as a server-based application with an API. Together with the team of academic researchers you will also get the opportunity to conduct a study to improve the usability of the application.

Requirements

- Knowledge on how to set up a server-based applications and APIs
- Design skills for the frontend development
- Python, JavaScript programming skills
- Interested in applying development skills to facilitate sustainable decisions
- Team-orientation (working in a team of 3-4 students)
- Excellent English writing and communication skills
- Starting: as soon as possible (duration of 3-6 month)

Application

Please send the CVs and grade reports of your team to Nienke.buters@tum.de.

Note on data protection

When applying for a position at the Technical University of Munich (TUM), you are submitting personal data. Please note our data protection information in accordance with Article 13 of the General Data Protection Regulation (DSGVO) on the collection and processing of personal data in the context of your application <http://go.tum.de/554159>. By submitting your application, you confirm that you have taken note of the TUM data protection information.