Further development of an information system based on a newly developed modelling language for energy systems

TUM CREATE

About TUM CREATE
TUM CREATE is a joint research programme between Technische Universität München (TUM) in Germany and Nanyang Technological University (NTU) in Singapore with funding by the National Research Foundation of Singapore. It is investigating innovative technologies, future transportation concepts and the application of electric vehicles (EVs) to match the challenging requirements of fast-growing tropical megacities. This is a highly interdisciplinary international research effort, combining expertise from several institutes from TUM and NTU.

Project Description
Energy system modelling requires the extensive use of modelling and data management tools. Due to the bottlenecks of the existing tools, an alternative information management and data storage system for multiple simulation and optimization models was developed. For that reason, a relational database model based on the extended Reference Energy System approach was designed and implemented that. Due to deficiencies in that approach the universal scheme for modelling energy systems was developed and specified on all levels of formality – informal, semi-formal and formal. The goal of this project is extend an existing database scheme and application system based on the new specification and requirements.

The position is available immediately. Applicants* should send a CV and covering letter by email to Dr. Heiko Aydt (heiko.aydt@tum-create.edu.sg).

Requirements:
- Undergraduate student in Computer Science (preferably with focus on Software Engineering)
- High standard of English (written and spoken)
- Good programming skills in C# are required
- Programming skills in SQL are beneficial

*Singaporean/PR applicants are preferred.