The Dr. Theo Schöller Chair of Technology and Innovation Management offers a **Interdisciplinary Project** with the following topic:

Explorative Blockchain Research – Understanding the rise of the Helium Blockchain as a decentralized infrastructure

Background and motivation

Blockchain as a technology received a lot of attention over the past years and the Helium Blockchain (https://www.helium.com/) is a blockchain that aims to build and operate a physical IoT network (infrastructure). The business model hereby is twofold: first Helium wants to reward everyone who is providing coverage in the peer-to-peer network, i.e. operating a hotspot, and secondly aims to ensure that every endnode sending (IoT) data packages over that network pays a small amount of money to the sending hotspot. Helium itself claims to be the first people-powered network and has seen tremendous growth in the past twelve months. The API is openly accessible and hence invites researchers to study this new phenomenon.

In this IDP you shall develop a concept on how to make this constantly growing online data accessible for research, implement your concept and hereby enable further management research. You will also run first analyses with your collected data and explore how the Helium Blockchain has been developing and growing in the past years.

The IDP should start before end of February.

Objectives and Methodology

The goal of this project is to build a dataset with which you can answer questions like:
- When and where have larger (commercial) operators of miners started to emerge?
- Where are particularly successful miners located and how did they develop over time?

To answer these questions you will first develop a concept for the dataset based on jointly defined requirements, then build it from the freely available data of the Helium blockchain (Web scraping). You will then develop a small set of own hypotheses and test them with your own dataset.

What we offer
- Work on an exciting topic with high relevance for science and practice
- Close coaching and a jointly defined timeline incl. milestones
- A fun but also challenging working environment

What we expect
- Structured and independent working style with openness to an explorative research topic
- First experience with Web scraping, handling of datasets (cleaning, documentation) helpful
- Very good grades

Contact

Please contact Lucia Baur (lucia.baur@tum.de) if you are interested in this topic. Your application should include your CV, a short letter of motivation (200 words max.) a current transcript of records and you preferred starting date. For more information on our general requirements, the application procedure, the application deadlines, and the style guidelines please go to https://www.tim.wi.tum.de/index.php?id=210.