IDP: Data collection of network data with Microsoft Graph

**Background:**
Around the world, 135 million users are using MS Office 365 or Office Online. With the help of the API Microsoft Graph is it possible to collect trace data from company networks. This data allows us to see who is communicating with whom or which people are sharing documents with each other. This new approach allows researchers to go beyond the limits of data collection.

As a proof of concept, we plan to develop a prototype, which shows the possibilities, and limitations of this newly introduced API for scientific use.

The IDP as well as the accompanying lecture like “Applied Strategy and Organization (6 ECTS)” are supervised by the Chair for Strategy and Organization.

**Goals:**
- Implementation of the API Microsoft Graph
- Evaluation, design and setup of a database appropriate for storing network data
- Automated data collection (crawling) of network data
- Data handling and consistency checks
- Development of a dashboard for analysis, overview and presentation
- Documentation

**Skill requirements**
- Interest in Big Data applications and Network Analysis
- Experienced in Python
- Advanced skills in SQL and database administration
- Basic skills in server administration & data security are recommended
- Excellent knowledge of the German or English language

We are looking for a team of 2-3 students with flexible working hours. The project can start immediately. The duration of the project is three to six months.

If you are interested, please contact Siegfried Müller (siegfried.mueller@tum.de). Please include a tabular curriculum vitae and a current excerpt of grades in one file with your application. A motivation letter is not required.

**Keywords:** Social Network Analysis, crawler, python, database design