Interdisciplinary Project
- Creating a Business Intelligence Tool

Our area of expertise:
We are a team of forward-thinking experts turning the most valuable asset of our entire organization - data - into business solutions. Paving the way for digital transformation of Volkswagen Group and ensuring the future of our business, we develop sustainable data driven products and unique customer experience. Combining innovative technologies, curious mindsets and unparalleled expertise in research, our work spans across all of the Volkswagen Group's brands. Our key areas of research include Advanced Analytics, Natural Language Processing, Deep Learning, Quantum Computing and AI Research. Furthermore, our team works in close collaboration with universities and public institutions, and the most innovative technology vendors and startups.

We are offering:
- Insights into innovative and future-oriented technologies and services of tomorrow's automotive industry
- Agile software development as well as coaching and mentoring during the IDP
- Fair remuneration for the statutory minimum wage based on a 35h/week
- Relaxed and open start up atmosphere
- Access to a unique network consisting of experts from various disciplines
Project background:
Due to an increasing number and complexity of projects and technologies within the Volkswagen Group IT and advanced requirements of the Volkswagen Group board the need of a management, portfolio and analytics tool has arose. Within previous IDPs several modules have been developed. These five modules are all part of our cloud-based business intelligence web tool that allows us to centrally store all information and analyze them. We are now capable of handling projects, technologies and absences within one tool. Due to the increasing number of users, it will be your task to integrate new functionalities and modules into the existing structure. For the implementation of this uniform and holistic tool we plan to work in a team with students that fulfill the following skillsets (you only have to fit into one role):

**Front-End Developer**
- Advanced skills in JavaScript and frameworks/libraries (especially Angular6 and Kendo UI)
- Experience in designing and creating user-friendly and responsive front-ends

**API Developer**
- Advanced skills in Rest API and Python (Flask)
- Experience in REST API design/integration

**Database Engineer**
- Advanced skills in MySQL
- Experience in creating and implementing databases

**Good programming and communication skills**

- Fluent English, German is not mandatory but highly welcome

- Enrolled in a master’s degree from TUM Informatics

Project procedure:
Project should occur as an agile application development based on Scrum, which is an iterative and incremental agile software development framework for managing product development. It defines a flexible, holistic product development strategy where a development team works as a unit to reach common goals, challenges assumptions of the traditional, sequential approach to product development, and enables teams to self-organize by encouraging physical co-location or close online collaboration of all team members, as well as daily face-to-face communication among all team members and disciplines involved. You will be awarded 10 ECTS for the above-mentioned development. Further, the development and results shall be documented in a written report and presented to the supervisors.

VOLKSWAGEN
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In accordance with the practical assignment, you participate in the course “Complex Scheduling in Manufacturing and Services: Models, Methods and Applications” (WI000541, WI200541; 6 ECTS), offered by the Operations Management chair. These academic insights will be needed in order to successfully work on this IDP. You must pass an exam on the course’s topics at the end of the interdisciplinary project.

**Project timeline:**
The IDP is scheduled to take place in the summer semester (SS 2020) and usually lasts about three months. Please send your application prematurely to the contact persons listed below as we.

**Contact:**
Please submit informative documents (CV, transcript of records, certificates, …) about yourself to the following contact person (please send to both persons):

- Christian Pletl christian.pletl@volkswagen.de
- Robert Willi robert.willi@volkswagen.de