



**FACULTY
OF INFORMATION
TECHNOLOGY
CTU IN PRAGUE**

ASSIGNMENT OF BACHELOR'S THESIS

Title: Analysis of an IoT solution for assessment of the physical difficulty of tourist tracks using smart wearables
Student: Zuzana Václavíková
Supervisor: Ing. Jan Krákora, PhD.
Study Programme: Informatics
Study Branch: Web and Software Engineering
Department: Department of Software Engineering
Validity: Until the end of summer semester 2020/21

Instructions

The aim of this thesis is to analyze, design and implement a PoC IoT solution for difficulty estimation of tourist tracks. Using a mobile application, the user shall be able to inspect a track in advance and assess how much effort each specific part of the track would require from them, based on data collected from similarly fit users.

1. Analyze and compare similar existing solutions.
2. Analyze and design an IoT solution for data processing.
3. Design a mobile application for data visualization and track selection.
4. Create a PoC of the IoT platform and of the mobile application.
5. Demonstrate the solution's functionality on a relevant use case, using real data collected from smart wearables.

References

Will be provided by the supervisor.

Ing. Michal Valenta, Ph.D.
Head of Department

doc. RNDr. Ing. Marcel Jiřina, Ph.D.
Dean

Prague January 6, 2020