

Bachelor's Thesis Assignment



154445

Institut: Department of Computer Graphics and Multimedia (DCGM)
Student: **Zobal Ondřej**
Programme: Information Technology
Title: **Generating Code from Textual Description of Functionality**
Category: Information Systems
Academic year: 2023/24

Assignment:

1. Get familiar with adapting large language models for code generation on domain-specific data from the GitHub or StackExchange archives.
2. Prepare a dataset of commented codes to evaluate the models being created.
3. Design and implement an extension for the Visual Studio Code editor that will add comments in appropriate places, suggest alternative variable names, and identify and correct potential errors in Python 3 source files.
4. Evaluate the results of the system on a representative sample of data, discuss the dependence of results on code complexity.
5. Prepare a poster presenting the work, its objectives, and results.

Literature:

- according to the supervisor's suggestion

Requirements for the semestral defence:

- a functional prototype of the system

Detailed formal requirements can be found at <https://www.fit.vut.cz/study/theses/>

Supervisor: **Smrž Pavel, doc. RNDr., Ph.D.**
Head of Department: Černocký Jan, prof. Dr. Ing.
Beginning of work: 1.11.2023
Submission deadline: 9.5.2024
Approval date: 22.4.2024