

AI Fo 2022 Graded Miniproject

This document specifies the miniproject. It will be graded and it counts 40% of your AI Fo grade (the other 60% come from the written exam).

1. Important Dates:

Start: Monday, October 3th 2022

Deadline: **Sunday, November 6th 2022 (upload your report before 23:59)**

2. Teamwork!

- We recommend to work in teams of two people. Larger teams are not allowed. Working alone is possible if you send me an email indicating your reason!
- Collaborate effectively! You learn more and you are faster when you discuss your ideas or problems.
- Both team members will get the same grade. We reserve the right to interview (randomly selected) team members in order to make sure no one gets a free ride! Note that fraud is not accepted at OST and may have severe consequences.

3. Specification

The goal of this miniproject is to write a Chat-Application in Python. The Python Client provides a command-line interface and uses the Dialogflow API.

Grading will be based on your report (PDF- File to be uploaded on Moodle), the source-code is not graded.

3.1. Minimal requirements

To obtain a **grade 4.0**, the following **minimal requirements** need to be implemented:

- **Dialogflow Agent:**
Specification of a chat-bot in Dialogflow. You are free to start from a predefined agent but you have to specify at least one additional intent and entity.
- **Python Client:**
Implementation of a simple command line interface in Python. The client reads text input, sends it to Dialogflow (using the Dialogflow API) and writes the agent's response to the command line.
- **Report (PDF File):**
Describe the architecture, the concepts you used, the features you implemented, and whatever you consider interesting. Make a few screenshots that clarify the usage of your client. Document both, the Dialogflow backend and the Python client. If you make use of additional services, make sure to clearly document how you integrated them.
 - write in German or English
 - The length of the report should be between 4 and 8 pages (not including a title page and an optional appendix).
 - Have a title page with all relevant information (team members, title, ...)
 - Add screenshots of your client application to show how it's performing.
 - Use an appropriate diagram to visualize the architecture of your application
 - Do not copy large code-fragments into the main report. But show at least one (interesting/relevant) code fragment and explain what it does.
 - Structure your report. Write at least four sections:
 - **Introduction** where you give some context and explain the goal of the project.

- Documentation of the **Python Client**: What your kind of service your client is providing. Screenshots of the working client
- Some details about the **Dialogflow-backend**. E.g. which intents etc. did you specify.
- **Discussion**: what you learned, what are the limitations of the chat-bot, etc.
- If you want to add some extra explanations, code, additional information, etc. put it into an appendix. The appendix does not count for the 7 pages maximum length.
- Focus on relevant content. Be concise. Remove clutter:
<https://www.acrolinx.com/blog/how-to-tidy-up-your-writing/>

3.2. How to get extra points (and a better grade)

We do not specify a list of criteria to get extra points. Anything that goes beyond the minimal requirements is appreciated. Here are some ideas:

You can add more intents and make the dialog more complex. Or you can browse the Dialogflow documentation and use some of the countless options. You could implement a more advanced process using fulfillments and make use of the GCP services (cloud functions, persistence, ...) . In general, be creative! Implement an interesting chat-bot! Also, make sure your report explains how you structured your software project. Use appropriate diagrams to document the architecture. For a project that shows some original implementations (something that goes beyond the examples given in the exercise session), and which is reasonably well documented, you can expect a grade around 4.5 to 5.5.

The grade 6 will be given for exceptional projects which exhibit some additional technical creativity.

4. How to submit your report

There will be an assignment called "Graded Project Report Submission" on Moodle (in the week 6 section). If you work in a team, **both team members will have to upload the (same) PDF File**. Do not upload the source code.

5. Manage your resources!

It is easy to get lost in the sea of possibilities and spend way too much time on this project. This project is worth 40% of your final AIFo-grade. Manage your resources accordingly.

6. Respect the deadline

If you do not hand-in a report by the deadline, we have to give you a grade 1.0. If you are unable to meet the deadline for important reason (illness, military service, etc.) the deadline can be discussed. Contact us as early as possible!