

MSD Reading Questions self-assessment bot - Assignment 1

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1 Form the Team

1.1 Team member distribution

Name	Role	Responsibilities
Kristina Alyabeva	Project Manager	Team management, program documentation, communication with the customer
Saveliy Chertkov	Developer	Backend-developer, NLP development, statistical analysis
Kirill Korikov	Developer	Project planning, full-stack development

1.2 Project description

NLP bot that will check some basic rules Reading questions assessment. The bot is supposed to help students to learn and self-check their work.

Rules can be:

- answer is too short / too long
- answer is irrelevant to the question
- answer is unclear / incoherent
- example is missing
- ll looks as chatGPT generated.

1.3 Project repository

https://gitlab.pg.innopolis.university/k.korikov/iu_rq_self_assessment_bot

1.4 Meeting with the customer

We contacted Andrey Sadovykh and made an appointment for October 4 at 15:00 online.

2 Research existing solutions

You can see the existing solutions research by following the link in Miro: https://miro.com/app/board/uXjVLXEHaQ0=?share_link_id=322123641857

3 Script for the Initial Interview with the Customer

Below are the questions that we plan to ask at the meeting:

- What is the model for? It will be used only by students for self-examination or by professor for help to assessment?
- Is there a need for a professor's role in program?
- Are the questions and articles static or will they change?
- Will the bot leave comments in the pdf or send a text during the feedback?
- Where will the bot be hosted?
- What are the requirements of the criterion "too short" "too much"? (number of rows of lines)
- Is it necessary to take into account the full design of the document (the design of the issues, the design of the document header, the formatting of the document) and how will this be evaluated?

4 Initial Vision for the MVP

Brief description: Telegram Bot which can accept PDF-files of student's RQ assignments, returning messages with a feedback of possible mistakes in following of the RQ rules and grading criteria.

Text in *italic* represents features that the team deemed the least important or most likely not possible to implement within the scope of the team's abilities and given deadline for the project completion.

List of the MVP features:

- Solution is a Telegram bot.
- Bot is always available via the Telegram messenger app

- Can accept PDF-file in the form of embedded file in the message.
- Parse the PDF-file into separate question-answer pairs.
- Use an external API to detect AI-generated content in the whole file
- Check each question-answer pair in the file according to the following criteria for the answers:
 - too short
 - too long
 - irrelevant to the question
 - unclear
 - incoherent
 - missing an example
 - Everything looks like it was generated by chatGPT.
 - Missing references, including page numbers
- Generate a response for each answer, whether the answer matches any of the aforementioned criteria.

Minimum: send message to the user, containing feedback for each answer in the file

Maximum: return the PDF-file with comments inside of it, highlighting problematic parts of the answer with a description of what is wrong according to the aforementioned criteria.

Features, needed in the MVP, according to the grading criteria for the RQs, but not stated clearly by the customer in their requirements, i.e. are required to discuss with a customer:

- the question is stated in bold before the answer
- file starts with the student's and assignment names at the top
- *check if the formatting is readable*
- the document has separate last page with all the references that were cited in the answers (bibliography page)
- The whole file, not including bibliography page does not exceed 2 pages
- file is in English
- *all necessary definitions are given*
- all assumptions are clearly stated before they appear