

# Assessment Project for Machine Learning Engineer

Time for Completion **3 days**

## Task Description

The support team frequently receives numerous inquiries about roaming tariffs and availability, most of which are already addressed in the internal knowledge base. To reduce the volume of these requests and enhance user experience, develop a question-and-answering chatbot capable of providing accurate and instant responses to user queries based on the knowledge base.

The chatbot should support the ability to access the user's message history, using the **last N messages** (up to 8) of the conversation to provide more context-aware and relevant responses. Responses should be provided in either **Ukrainian or English**, depending on the input parameters passed to the API.

## Requirements

### Technical Requirements

- Use only open-source services to build the final solution.
- Utilize open-source LLM models (up to 12 billion parameters) capable of running locally on a CPU.
- Develop an API interface for chatbot interaction. The API POST request format should be as follows:

```
body = {
  "input": {
    "question": "Що таке поїмнір?", # Question to the chatbot
    "language": "Ukrainian", # Language of the response
    "session_id": "random-uuid", # Session ID, to access chat history
  }
}
response = requests.post(agent_url_invoke, json=body)
print(response.json()["output"])
```

- Ensure that the API is accessible on port **8030**.
- The solution must be executable with a single command, such as **docker-compose up** or **docker run**.

### Report Requirements

Prepare a concise report in Markdown format that includes the following:

- A detailed description of the steps performed during the project.
- A justification for the chosen components and methodologies.
- Clear instructions on how to set up the project and send requests to the API.

## Submission Format

- Submit an archive containing the project source code and a detailed report in Markdown format.
- Ensure the deployment process is straightforward and easy to follow.
- Do not forget to include the report in the submission.