

# JLPT DOU - JLPT 道- Whitepaper

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AI supported Chat and learning, the path to JLPT

## 1. AI opportunity

LLM programs allow for the development of highly specialized conversation agents. High quality conversation agents can interact with users in the same way as language teachers do online.

Modern LLMs (e.g. ChatGPT by OpenAI and the open-source Llama by Meta) translate, read and write in Japanese. They understand the Japanese Language Proficiency Test Levels and can change the conversation style to match the difficulty levels.

## 2. Goal

The goal of JLPT DOU is to provide an app for users to learn the Japanese language naturally through conversation.

The app tracks the progress and usage quality of JLPT vocabulary during conversations. The metrics are used to evaluate the user's proficiency in preparation of a JLPT test and guide the conversations.

## 3. Tech Overview

- OpenAI API is used to provide engaging conversations tailored to the user's preferences e.g. proficiency level, personal interests
- MeCab and OpenAI API are used to identify and evaluate JLPT vocabulary usage in conversations
- Google User Management is used for secure login
- React is used as the frontend (Vite)
- Python is used for the Backend (Flask, OpenAI and Redis Libraries)
- Redis is used as primary DB

#### **4. LLM credits and Licensing**

The app currently uses gpt-4o-mini-2024-07-18 by OpenAI with a paid API key. The application can be switched to other (self)-hosted LLMs, e.g. the open source Llama model by Meta. This reduces costs and allows for potential licensing.