Credit Task 3.1 - Quiz App

4. In this developed app, seek ways of harnessing Llama 2 and similar LLMs (Large Language Models), write a short report of ideas (500 words).

Llama 2 and other LLMs can be utilised to both enhance and expand quiz applications (and other similar applications) in various ways. Some of these ideas include:

1. **Response Feedback**
   In certain contexts, it might be helpful to have more thorough feedback for answers other than 'right and wrong'. For example, it's common for students to use practice questions in the lead up to an exam – using Llama 2 to tailor feedback in relation to a user's input would be very beneficial in their education. For example, a question might be on Object Oriented Programming, and the user selects the wrong option when asked 'what are the principles of OOP' – the model could then explain the 4 principles in a slightly more detailed, and tailored response. In addition to this – a summarising response to the quiz results might have suggestions for revision, or helpful resources tailored to the users areas for improvement.

2. **Question Generation**

   In cases where the app developer might want the quiz to feel 'unlimited' in length, utilising Llama 2 and other LLMs to generate questions in a particular format that is suitable for the application would be an efficient use for the tool. This would alleviate the need for the developer to manually source/create a vast number of questions, and would also provide opportunities to cover a more expansive and diverse set of quiz questions, covering a range of categories. After all, a quiz application is only as good as the volume of quizzes that are provided – no one wants to download a quiz application with 5-10 static quizzes.

3. **Adaptive Difficulty**
   For more experienced quiz masters, the ability to tailor the difficulty to suit their capabilities would create a more flexible experience for the user. Quite often, quiz apps can either be too easy or too hard, and inflexible in their design. Llama 2 could be used in numerous ways to better customise the difficulty, including

generating hints to make questions easier, creating more options to make it harder, or even rephrasing questions to make them more ambiguous and more like a clue than a question. These kinds of app enhancements wouldn't just allow it to appeal to a wider audience, it could also improve user retention, as the app is more dynamic in the way it responds to the users handling of difficulties (I.e. difficulty increases as the user improves).

In terms of implementation, it would be possible to incorporate Llama 2 either locals on the device[i], or using an API to send prompts and receive generated content, which would utilise less computational resources[ii].

REFERENCES

[i] *Local LLM for Mobile: Run Llama 2 and Llama 3 on Android*. (2024). Picovoice.ai. https://picovoice.ai/blog/local-llm-for-mobile-run-llama-2-and-llama-3-on-android/

[ii] How to build a Llama 2 chatbot. (2023, July 21). Streamlit. https://blog.streamlit.io/how-to-build-a-llama-2-chatbot/