

## **Introduction**

Developed by Meta AI, Llama 2 is an advanced open-source Large Language Model (LLM) capable of generating human-like text, answering questions, summarizing content, and more. Integrating Llama 2 into a mobile quiz app enables powerful AI-driven functionality beyond fixed question banks. It opens the door to intelligent tutoring, adaptive learning paths, and a more engaging and personalized user experience. This report explores several innovative ways in which Llama 2 can enhance mobile quiz apps.

### **1. Topical Q&A Generation**

Traditional Q&A mainly has a database of related questions, and the application randomly extracts questions from the database to ask users. With Llama 2, the application can dynamically generate questions based on user preferences or selected topics. Llama 2 can return complete questions with correct and incorrect options, without hard-coding questions, and allows educators or students to customize content according to their needs. In addition, Llama 2 can also adjust the complexity or difficulty of the language based on the user's grade.

### **2. Personalized learning feedback**

Traditional Q&A can only provide users with whether the answer is correct or wrong, and give a unified analysis of the problem. However, Llama 2 can accept users' questions, understand human natural language, and help users solve the key points that bother them in the analysis. Using Llama 2 can make the application closer to the process of teachers and students communicating and solving doubts, give feedback on problems, and recommend users related questions to enhance learning effects, making the program smarter and more effective.

### **3. More types of questions**

Most of the questions in traditional applications are multiple choice questions, because the correct answer is a fixed option, and the program can judge whether the user is correct. If there are fill-in-the-blank questions, since there are only reference answers in the database, the program cannot judge whether the user is correct and cannot give effective feedback. Llama 2 can support such questions. Llama 2 will understand natural language and judge the deficiencies or errors in the user's answer to help users find their own problems. At the same time, Llama 2 can allow users to ask him deeper questions to create a conversational learning experience.

### **4. Situational learning**

Users can select a topic, and Llama 2 will determine a story close to real life based on this topic, and ask questions in it to give users a stronger real experience. For example, if the user proposes the topic of participating in a marathon, Llama 2 will assume that the user is an ordinary person with no relevant experience. It will ask what to prepare for participating in a marathon, how to participate, and what to do after finishing the race. Users learn relevant knowledge in continuous dialogue and can actually apply it in reality.

### **5. Difficulty adjustment**

Traditional Q&A only randomly asks questions related to the database, without any difficulty

classification. Llama 2 can be used to set questions of different difficulty levels based on the user's answers. If a user answers ten simple questions correctly in a row, Llama 2 will determine that the user has basically mastered the basic knowledge and will give the user a more difficult question. Similarly, if the user always answers incorrectly, Llama 2 will suggest that the user change the difficulty of the question. Only when users answer questions that correspond to their own situation can they effectively improve.

## **Conclusion**

Llama 2's integration transforms the quiz app into a smart, dynamic and highly personalized educational platform that bridges the gap between static quiz interfaces and AI tutoring by generating questions, providing feedback and engaging users in conversational learning.