Pass Task 2.1 - Unit Converter App

Student name: Travis Levine

Student ID: 222010009

Video demonstration link: https://youtu.be/0XgLTuYmdoU

GitHub SIT315 2.1P repo link:
https://github.com/SneakyPluto/SIT305/tree/master/2.1pUnitConverter

Subtask 3: Research on Llama2

Llama2, is a type of Large Language Model (LLM) it provides strong potential to enhance mobile Android applications by providing intelligent features and automation for users. It has capabilities in natural language processing and generation which thereby allowing user interactions, streamlined tasks, and improve overall app functionality. The upcoming sections highlight five powerful use cases for Llama2 in mobile apps.

Voice Assistants

Llama2 has the ability to improve voice assist within applications by improving the applications accuracy when understanding user-commands, thereby executing them more accurately and efficiently.

- **Natural Language Understanding**: Llama2 can parse multi-step instructions, which will allows seamless user device interaction (Guan et al., 2024).
- **Contextual Awareness**: Llama2 can access user history and preferences, which will provide personalized responses, making personalised interactions for the user, providing further engagement.

Task Automation

Mobile apps will use Llama2 to automate tasks that are repetitive, in turn improving user efficiency and productivity..

- **Modular Task Learning**: Llama2 can break down complex tasks into smaller, manageable sub-tasks, thereby allowing the user(s) to use automated workflows with higher accuracy (Lee et al., 2024).
- **Cost and Latency Reduction**: If implemented properly Llama2 can promote reduction in operational costs and latency, making task automation more easily accessible (Lee et al., 2024).

Document Management

Llama2 can be integrated into document management applications to enhance user experience.

- **Multi-Document Interaction**: Llama2 can process different document types (PDF, DOCX, csv etc) thereby providing further user flexibility with queries and retrieving relevant information efficiently (Joshi et al., 2024).
- **Enhanced Search Capabilities**: Llama2 provides vector storage and retrieval systems, which can provide further efficiency of searching through large document collections (Joshi et al., 2024).

Content Generation

Llama2 can be employed in a host of applications, I found its usage in content creation applications to be interesting.

- **Custom Blog Generation**: Llama2 can provide user relevant blog posts tailored to specific topics, which provides users the ability to create content quickly and efficiently (Verma & Kurupudi, 2024).
- **Fine-Tuning for Specific Needs**: Llama2 allows users to customise it to their own preferences and requirements. Thereby ensuring high-quality content output without exposing their data any third parties (Verma & Kurupudi, 2024).

Intelligent Recommendations

Llama2 enhances mobile app recommendation systems which can provide users with more aligned personal suggestions.

- **User Behavior Analysis**: By analyzing user interactions and preferences, Llama2 can generate tailored recommendations, improving user satisfaction (Liu et al., 2024).
- **Integration with IoT and AR**: Llama2 model can be combined with augmented reality and IoT technologies to create immersive and interactive user experiences(Liu et al., 2024).

References – APA 7th edition

Liu, L., An, H., Chen, P., & Ye, L. (2024). *A Contemporary Overview: Trends and Applications of Large Language Models on Mobile Devices*. https://doi.org/10.48550/arxiv.2412.03772

Lee, S., Choi, J., Lee, J., Wasi, M. H., Choi, H., Ko, S., Oh, S., & Shin, I. (2024). *MobileGPT: Augmenting LLM with Human-like App Memory for Mobile Task Automation*. 1119–1133. https://doi.org/10.1145/3636534.3690682

Joshi, P., Sati, S., Sar, A., Aich, S., Choudhury, T., Kotecha, K., & Özseven, T. (2024). *An End-to-End Framework for Multi-Docs Chatbot using Llama2*. https://doi.org/10.1145/3660853.3660921

Guan, Y., Wang, D., Chu, Z., Wang, S. X., Ni, F., Song, R., & Zhuang, C. (2024). Intelligent Agents with LLM-based Process Automation. 55, 5018–5027. https://doi.org/10.1145/3637528.3671646

Verma, A. A., & Kurupudi, D. (2024). *BlogGen- A Blog Generation Application Using Llama-2*. 1–6. https://doi.org/10.1109/adics58448.2024.10533489