

DICA - Dengue Intelligent Chatbot Assistance

Project Overview

The development of Large Language Models (LLMs) have become increasingly significant in the field of Natural Language Processing (NLP) in recent years due to its remarkable use in instruction understanding and human-like response generation. They have proven to be highly utilised in both academic and practical applications in healthcare. As the technology behind LLMs continues to evolve, their impact on society and industry is potential in further development, making them an increasingly important area of research and development.

This collaborative initiative, undertaken in partnership with the Oxford University Clinical Research Unit (OUCRU), is focused on the development of a Large Language Model (LLM) machine learning system. The primary objective of this project is facilitate the development of a web portal incorporating a LLM designed to engage in contextual discussions concerning Dengue-related topics and other general medical issues.

To achieve this, the proposed LLM will undergo fine-tuning using a diverse array of medical data sources. The aim is to equip it with the capability to offer pre-diagnostic information and provide feedback to users in a manner that closely emulates human-like interaction. The efficacy of the model will be evaluated based on its ability to proficiently handle question-answering tasks while ensuring comprehensibility. The outcomes have demonstrated a notable success, as the fine-tuned models have outperformed the base model across a range of key evaluation metrics.

Furthermore, as part of an effort to enhance user accessibility and engagement, this project includes the development of a dedicated website portal featuring a chat interface. This interface will seamlessly integrate with the proposed LLM model, resulting in an improved and user-friendly experience for individuals seeking Dengue-related medical information.