

Development of an ai-based customer service chatbot with voice and text interaction

(Development of an ai-based customer service chatbot with voice and text interaction)

Supervised by Arvita Agus Kurniasari, S.ST.,M.Tr.Kom

Nur Rahmat Ramdhan

Study Program of Informatics Engineering

Majoring of Information Technology

ABSTRACT

Currently working on an AI based customer service chatbot with text and voice support for Management & Science University. Our system tackles common issues in university information services such as long waiting times for responses, limited access after office hours, reliance on human staff members and inconsistent outcomes to frequently asked questions related to the academic programmes offered by a university, facilities available within a campus, faculty details, admissions fees among others. This chatbot combines STT, LLM (using GroqCloud API) and TTS with llama-3. 1-8b-instant, and whisper-large-v3. Features: real time voice interaction, responses are generated by an AI model and a simple web interface. The system is tested functionally, by STT accuracy and response time preparation, as well as usability (SUS) and User Acceptance Testing (UAT). The results show that they improve access, response-time, and reliability whilst generating coherent responses.

Keywords: *AI chatbot; customer service; voice interaction; Speech-to-Text; user acceptance*