

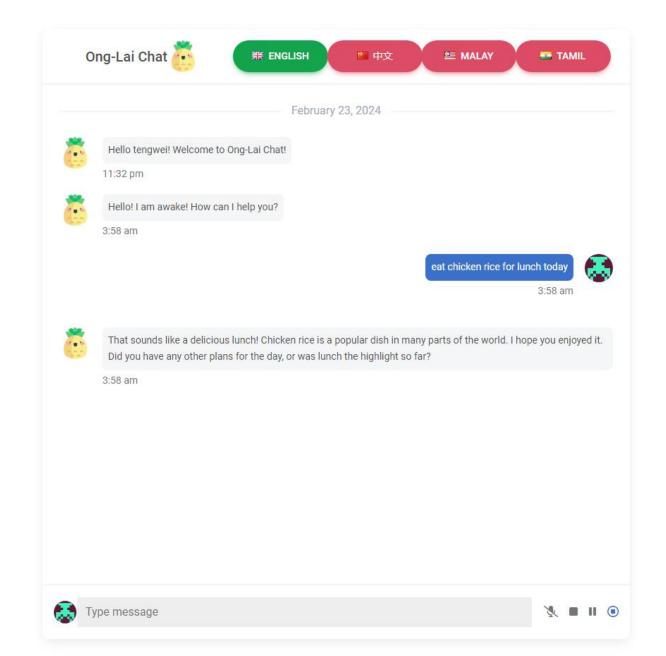
School of Computer Science and Engineering College of Engineering

Ong-Lai Chat

Audio-driven chatbot companion for the elderly

Student: Goh Teng Wei

Supervisor: Dr Shen Zhiqi



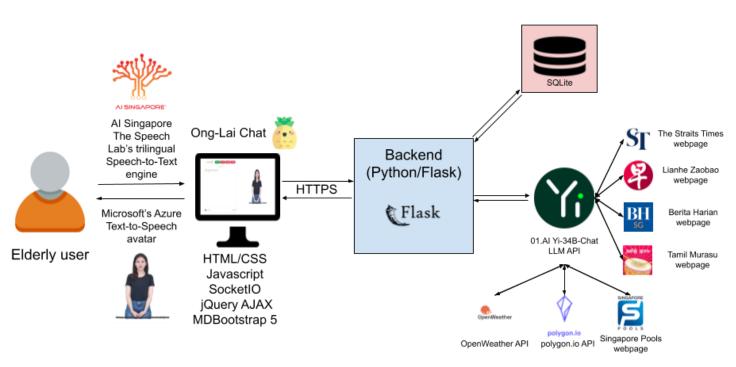


Project Objectives:

Ong-Lai Chat is a proactive, audio-driven chatbot companion that aids the elderly dealing with Ioneliness issue. It utilises a state-of-the-art Large Language Model to generate appropriate responses and a trilingual Speech-to-Text engine to detect words spoken with a Singaporean accent accurately. Moreover, a photorealistic avatar is integrated into the chatbot to provide voicing out and lip-syncing of the generated responses, providing a human-like interaction for the elderly. **Key Features:**

- Singpass, Facebook, and Google Authentication
- **Proactive & Initiation of conversations**
- Automatic lottery results broadcast (4D & TOTO)
- Calendar events scheduler & reminder of events
- Retrieval of live information (Weather, Stock prices, News, Lottery results)
- Trilingual speech detection (English, Chinese, Malay)
- Quadrilingual output (English, Chinese, Malay, Tamil)
- Wake word activation & Sleep word deactivation

System Architecture



https://www.ntu.edu.sg/scse