# COMP39/9900 Computer Science/IT Capstone Project
# School of Computer Science and Engineering, UNSW

**Project Number:** P17

**Project Title:** CALDtalk: Overcoming language barriers in our community

**Project Clients:** Sonit Singh

**Project Specializations:** Software development; Web application development; Mobile application development; Artificial Intelligence (Machine/Deep Learning, NLP).

## Number of groups: 2

## Background:

Australia has a rich diversity in population with individuals coming from culturally and linguistically diverse backgrounds (refers CALD in short). Across many industries such as healthcare, aged care, and government services, we need help of professional interpreters as these people do not speak English well. Having a professional interpret readily available always is not feasible and it is expensive. To overcome language barriers in our community, there is a need to have an app which can translate languages and provide equitable services.

## Requirements and Scope:

The aim of the project is to develop an app using artificial intelligence technologies such as automatic speech recognition such as OpenAI Whisper model and large language models (LLMs) for machine translation. The goal is to utilise existing open-source technologies in the form of APIs and making a functional app for translation services.

We got a list of common phrases used in residential and community aged care settings which can be used to check performance of the built app.

## Required Knowledge and skills:

For this project, we aim to use open-source UI frameworks such as Flutter, open-source LLMs such as Llama3 and OpenAI Whisper model to develop a functional app for translation services to be useful for community.

## Expected outcomes/deliverables:

The team working on the project should deliver a written report on the project, source code, and working web application.

## Supervision:

Sonit Singh

## Additional resources:

https://talktome.svhm.org.au/