# IASRProject instructions

In this project we will create a calculator which can be controlled by speech using a model trained for speech recognition.

This project will use python with the following libraries

- Librosa

- Pytorch

- SciPy

- numpy

- noisereduce

- ipykernel

- sounddevice

- torch

- torchvision

- torchaudio

- tqdm

- flask

- flask-cors

And flutter is needed to run the client

# Instructions to run

1. Run backend  
   To run the prototype the server needs to be run by using the following commands in the `server` folder:  
   `python3 -m flask --app ./src/main.py`
2. Send data to backend  
   After running this a local server will be started on port 5000.  
   Now using Flutter navigate to the `client` folder and run `flutter run`  
   If this does not work testing files can also be send to the backend using `curl` to do this run the command  
   `curl -i -F "file=PATH\_TO\_PROJECT/IASRProject/server/test/success\_test.wav" -X POST -H "Content-Type: multipart/form-data" <http://localhost:5000/calculate>` replace the `PATH\_TO\_PROJECT` part with the actual path to the project on your computer.  
   Our training data was sadly too big so it could not fit in the upload size, get it in our public github repository here: https://github.com/thebetar/IASRProject

Commit linting is done with Husky.js to install project properly run `npm install`