

input-speech

About

input-speech is an instrument that uses its microphone for recognizing voice commands, to train a neural network built with the Google TensorFlow library. This allows you to control different multimedia outputs.

The instrument can be programmed with a computer and then run as a standalone instrument, or you can use its serial port to communicate with your computer for debugging or interfacing with other software.

Installation

Follow the instructions on [installation.md](#).

Wiring

Follow the instructions on [wiring.md](#).

Code examples

hello_tiny_world: this is an example that cycles through all the LEDs and their colors.

Data collection

Record .wav files with this format:

- 1 audio channel (mono)
- 16 kHz sample rate
- 16 bits per sample: 16 bits

Training

Open your terminal and go to the instruments folder.

```
cd instruments
```

Activate the virtual environment

```
source env/bin/activate
```

Run Jupyter lab

jupyter-lab

Open the window on your web browser, and navigate to the notebook (TODO change name) Instrument2.ipynb

Deploying

Open the Arduino sketch