EECS 690/700 EmbeddedML Lab #5

Mask Detection (VWW)

In this lab, you will train and deploy a mask detection model onto the XIAO ESP32S3 board.

Overview

Our VWW application will recognize if wearing mask or not:

- 0 - Mask
- 1 - No mask

Part 1. Training VWW

Task 1.1. Prepare the lab folder

Update the github and add '`15-vww`' folder in VSCode

Task 1.2. Train the model and generate the C converted model

Open the 'train.ipynb' notebook.

This is the slightly modified version of the mask detection tutorial we did before in which model generation for deployment is added.

You can execute the notebook locally on your laptop or using colab.

If you use the colab, you need to download the 'model.cc' file on the cloud into the 'src' folder of your local project.

If you run the notebook locally, the model.cc file will be automatically placed in the 'src' folder.

Task 1.3. Build & Upload to the ESP32-S3 board.

Hit the build and upload button.

References

https://www.hackster.io/mjrobot/tinyml-made-easy-keyword-spotting-kws-5fa6e7
https://www.hackster.io/mjrobot/tinyml-made-easy-image-classification-cb42ae