**Project 02: Face Detection**

1. Clone the github repository into local system

**git clone** [**https://github.com/ameer-aiml/age-gender-openvino-rpi**](https://github.com/ameer-fice/age-gender-openvino-rpi)

1. Go to Age Gender Detection folder

**cd** [age-gender-openvino-rpi](https://github.com/ameer-fice/age-gender-openvino-rpi)/[AgeGender](https://github.com/ameer-fice/age-gender-openvino-rpi/tree/main/AgeGender)

This repository contains 3 different models.

One for Face Detection, another for Age and last one for Gender Detection.

Both the files of Face Detection is available. The .caffemodel files of Age and Gender are missing.

1. Download the Age and Gender Caffe model from this site using the command wget

(Github doesn’t support more than 25 mb file)

**wget** [**https://www.dropbox.com/s/iyv483wz7ztr9gh/gender\_net.caffemodel**](https://www.dropbox.com/s/iyv483wz7ztr9gh/gender_net.caffemodel)

**wget https://www.dropbox.com/s/xfb20y596869vbb/age\_net.caffemodel**

1. Run the python file (it should be python3)

**python3 face\_detection.py**

**Errors which might be faced:**

1. **cv2.error: OpenCV(4.4.0-openvino) ../opencv/modules/dnn/src/ie\_ngraph.cpp:638: error: (-2:Unspecified error) Failed to initialize Inference Engine backend (device = MYRIAD): Can not init Myriad device: NC\_ERROR in function 'initPlugin'**

**Either VPU isn’t working or you are using VPU in USB 3.0 ( Connect it to USB 2.0)**

**Challenge to try out:**

**Convert all the above mentioned 6 files into xml and bin file respectively using model optimizer for unified way of model building.**

If you want to use your model for inference, the model must be converted to the .bin and .xml Intermediate Representation (IR) files that are used as input by Inference Engine. OpenVINO™ toolkit support on Raspberry Pi only includes the Inference Engine module of the Intel® Distribution of OpenVINO™ toolkit. The Model Optimizer is not supported on this platform.

Install Openvino on Windows / Linux System and use model optimizer

**Refer:** [**https://docs.openvinotoolkit.org/latest/openvino\_docs\_MO\_DG\_Deep\_Learning\_Model\_Optimizer\_DevGuide.html**](https://docs.openvinotoolkit.org/latest/openvino_docs_MO_DG_Deep_Learning_Model_Optimizer_DevGuide.html)

**Project 3**

**SSD**

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