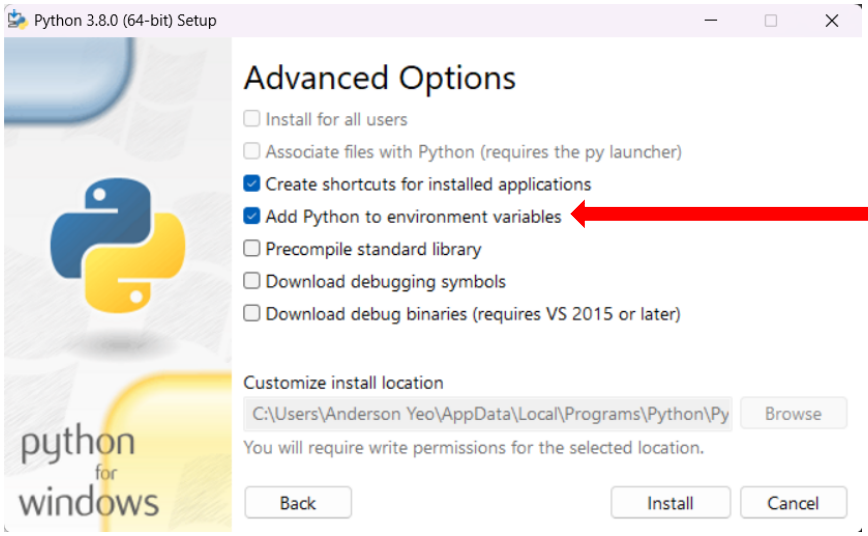
User manual for Fundus_Image_Classification.pynb training file:

1. Use python version 3.8.0 because python 3.12 still have certain incompatibilities that cannot run some of the of the code.

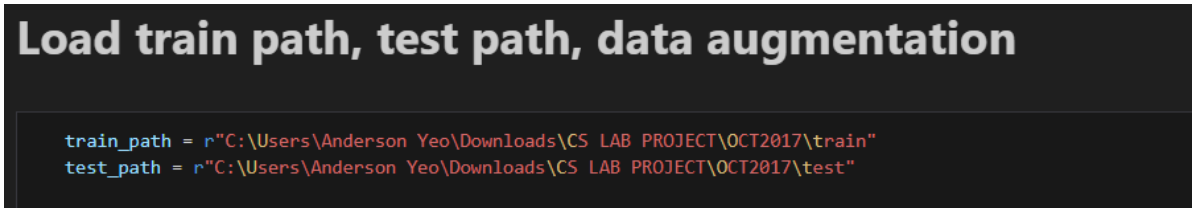
- Uninstall your python version 3.12
- Download python 3.8 from here https://www.python.org/downloads/release/python-380/
- Install python 3.8



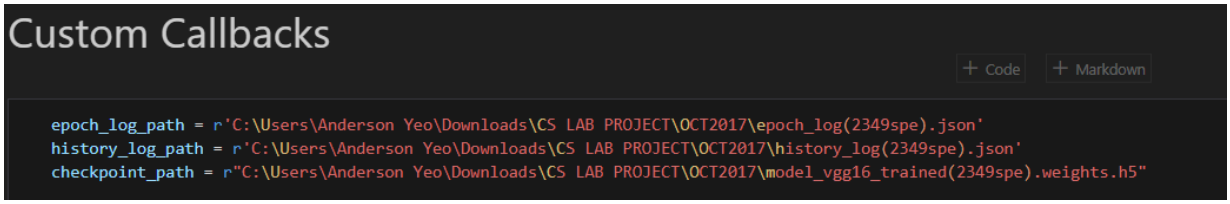
When install make sure to tick "Add Python to environment variables"

- In VS code, select python 3.8.0 as interpreter (when running the code).
- Open VS code terminal, type this to install the libraries: **pip install —upgrade tensorflow**
- and: **pip install numpy scipy matplotlib scikit-learn streamlit**

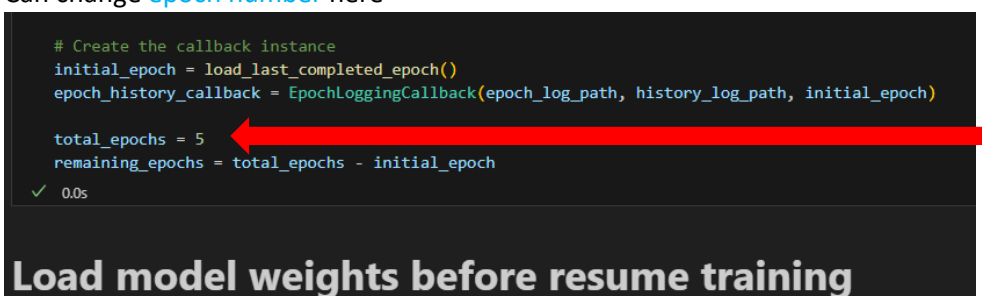
2. Change all the paths of dataset to your own path in your pc



3. Change the paths to save your epoch log, history log, checkpoint. Give the filename at the end, eg: epoch_log.json, history_log.json, model.weights.h5
   For checkpoint_path, the filename must end with **.weights.h5**

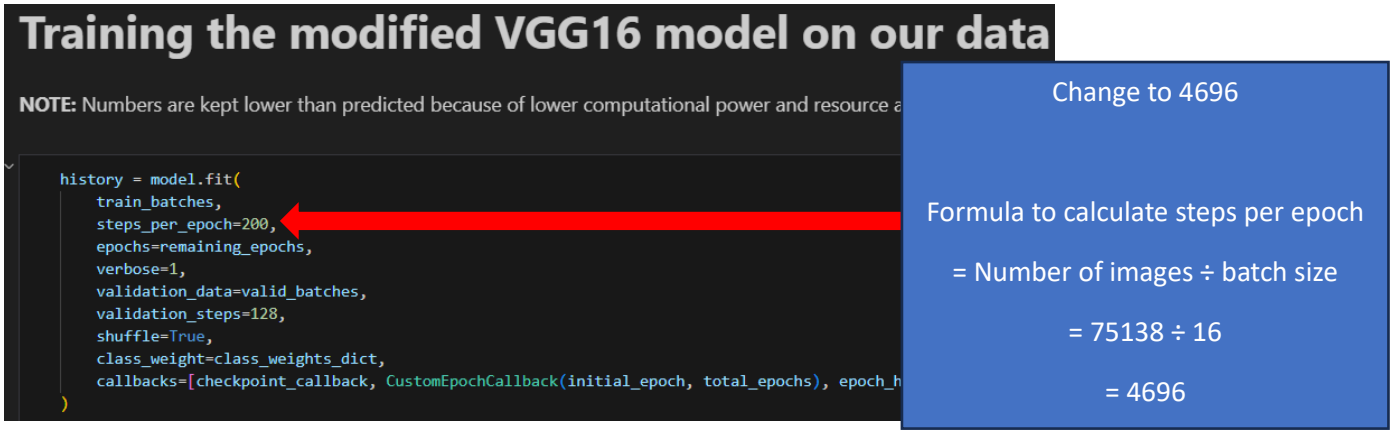


4. Can change epoch number here



The higher the number of epoch the better

5. Change steps per epoch here

- 

6. Start training by running all the code

User manual for predictionapp.py file:

1. Change the path to the path same as checkpoint_path

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```
# Load the weights
weights_path = r"C:\Users\Anderson Yeo\Downloads\CS LAB PROJECT\OCT2017\model_vgg16_trained(2349spe)2.weights.h5"
try:
    model.load_weights(weights_path)
except Exception as e:
    st.error(f"Error loading weights: {e}")
```
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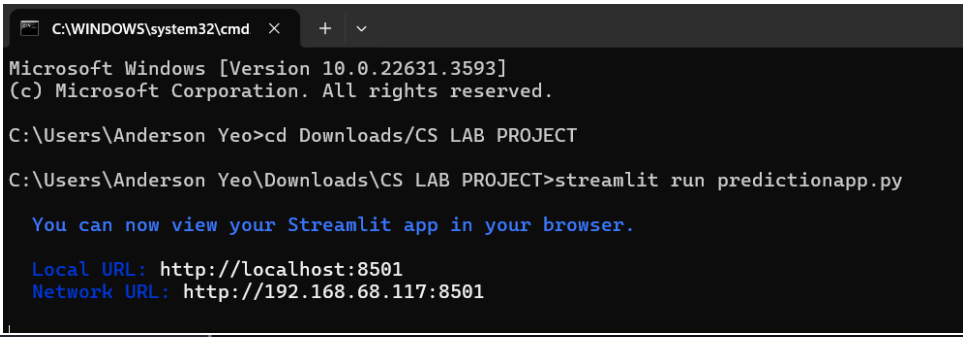
2. To run the app:

- Go to windows terminal by clicking (**Windows button** + **R**) then type **cmd**, then **enter**.
- Go to the **directory of the folder** where your predictionapp.py file is saved. Eg: cd Downloads/CS LAB PROJECT
- Type: **streamlit run predictionapp.py** to run the app. The app will open in the browser.
- Example:

- 

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