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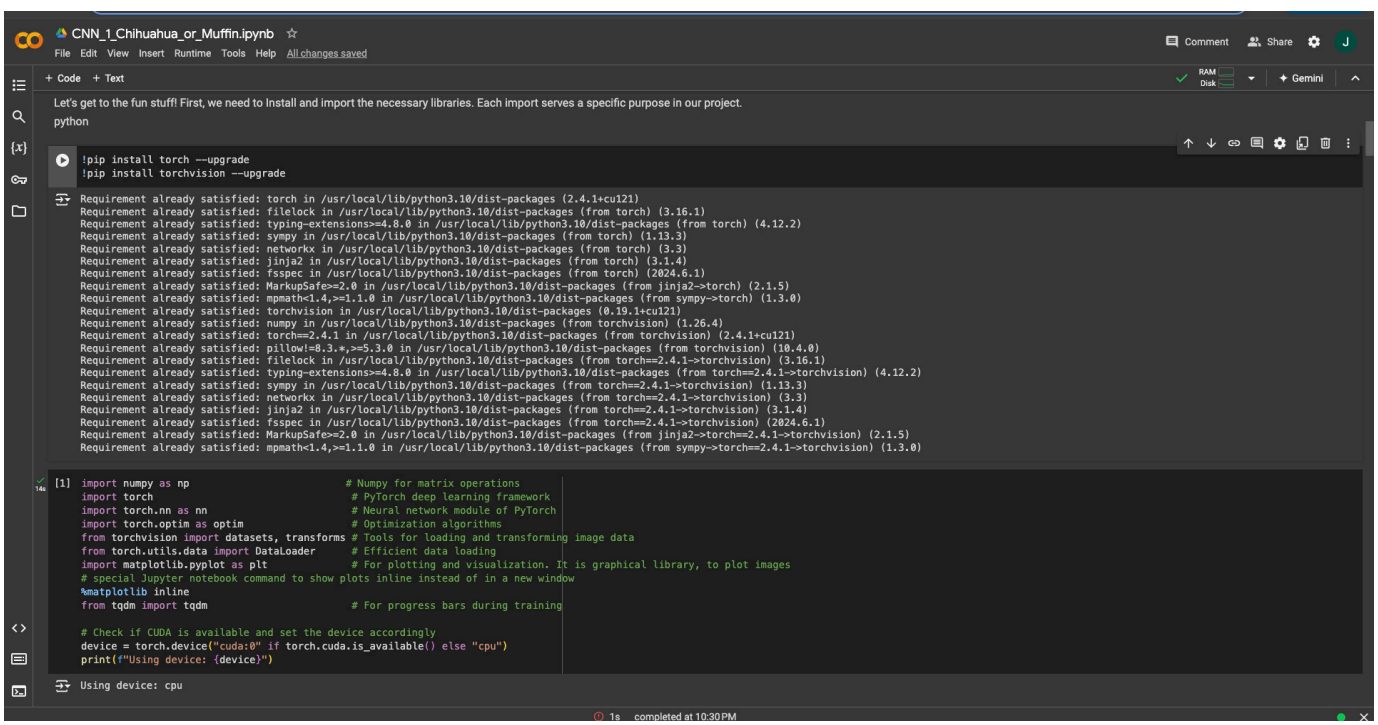
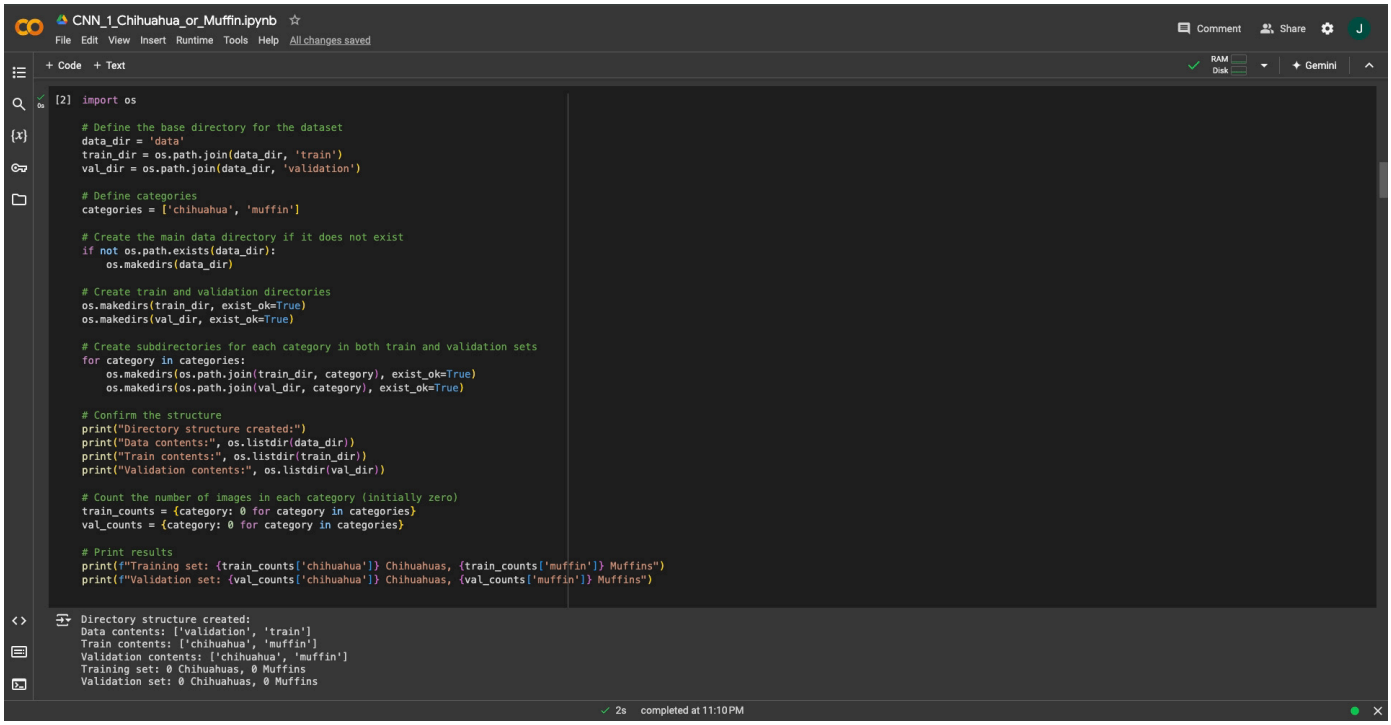
L07 Reflective Journal

This was a very fun lab to partake in learning, and adjusting more on how to incorporate different datasets, debugging and correcting syntax, doing extensive research to understand how to implement everything. CNN which is a convolutional neural networks is a neural network used for processing grid data, such as images. Unlike traditional fully connected networks CNNs use spatial structure from input data making them very effective for tasks like image classification. I personally used the CIFAR-10 dataset to train my CNN model for this case. Started off by importing the required libraries needed I personally feel comfortable using numpy for matrix operations, torch as a deep learning framework, matplotlib for the graphics, if I'm not mistaken this is my first time using "tqdm" for the progress bars during training, it was very



interesting because as I ran the cell with tqdm operating I got to see a visual representation of the progress bar giving me an insight on where everything is at with the initialization. A problem that I experienced through this process was making sure the necessary datasets were imported to get the commands to run.



This is where I began data preparation the main problem that I faced was defining the dataset was the main issue that I faced during this stage, I was able to overcome this problem by understanding how to properly intertwine this issue by understanding how paths work. I overviewed the code to understand that the 2 main categories where chihuahua and muffin, the purpose is to understand the difference between both. Based on the final display I understand the importance of CNNs and its abilities to decipher the difference between 2 different images being able to train itself and adapt to current data is very impressive. As far as ethical considerations are concerned I do feel that data is very accessible, but its also beneficial to the future of how things will go.