

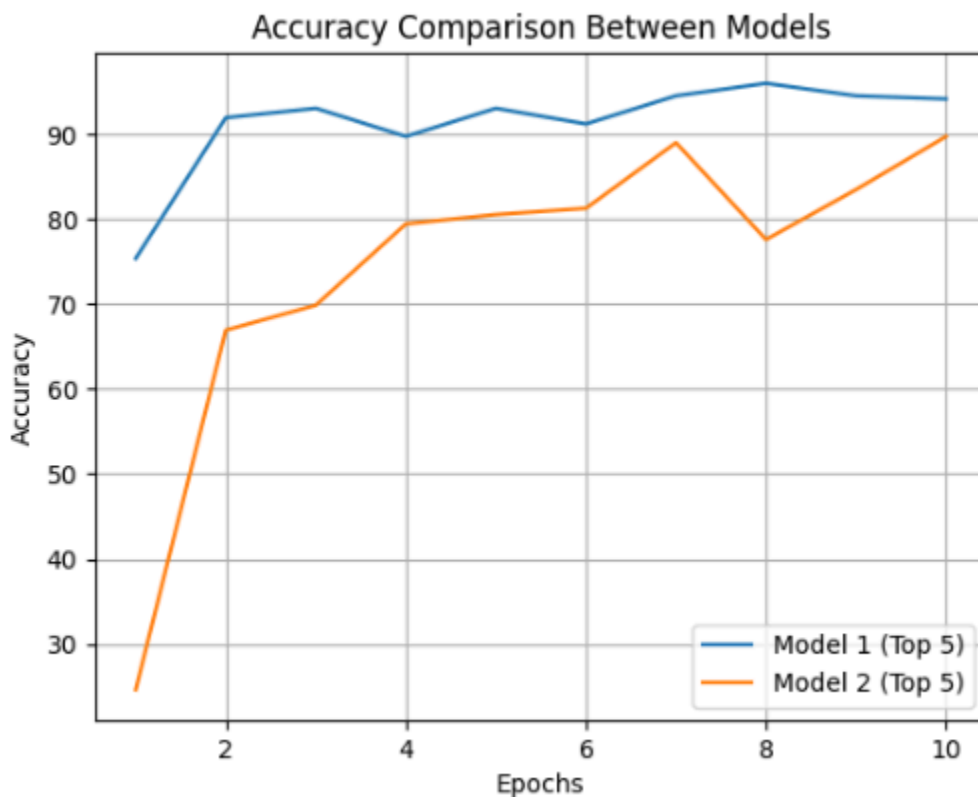
## Evaluation analysis

I compared the accuracy of both models, The model worked better with an average accuracy of 91 compared to a model with an average of 74

**Model 1:** Resnet **Model 2:** Mobile

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Model 1 Average Accuracy (Top 1): 50.51472
Model 1 Average Accuracy (Top 5): 91.32353
Model 2 Average Accuracy (Top 1): 29.374990000000004
Model 2 Average Accuracy (Top 5): 74.22795
Model 1 performs better in terms of Top 1 accuracy.
Model 1 performs better in terms of Top 5 accuracy.
```

I plotted an accuracy graph using the log files:



As shown above, Model1 starts off strong at 70% and finishes strong with 90% accuracy which seems to be consistent after the 8th epoch while Model2 starts off really weak at 30% and finishes off well at 80% with a bit of drop off on the 7th epoch.

## **Lessons learned from Assignment 1**

I learnt not to leave things to the last minute as that makes it harder to get assistance with debugging, so I will make sure to start future assignments earlier. Creating subfolders was straightforward after figuring out how to assign the keys as class label names for the files. I struggle mostly with setting up the config files, as it is confusing where stuff goes.

The documentation could have been more straightforward. Understanding documentation should be a new skill I should work on as that took a few days to get my configs working. I had to figure out what lines of code to keep and replace and what had to be changed. Thankful it was just a matter of changing directory paths and class sizes to match my data.

A major issue ran into was running my train.py, this wouldn't work with my GPU on collab to train the model so I had to use my CPU due to errors I got regarding CUDA. I had to re-install my packages multiple times before StackOverflow confirmed this to be a known issue.

<https://stackoverflow.com/questions/68166721/pytorch-fails-with-cuda-error-device-side-assert-triggered-on-colab>

The error wouldn't provide a traceback on the GPU, but on the CPU it showed me that it was an outbounds error due to having 18 folders in one of the subfolder directories instead of 17. Google Colab for some reason saved a checkpoint file in my subfolder.