Lab 5.3 Transfer Learning

* General info about the lab:
  + Introducing Transfer Learning
  + High level understanding of neural network layers
  + How to train networks that are on a par with other state-of-the-art models
  + What is Fine-tuning?
  + Features extract VS. classification.

Considerations

* How hard is this?
  + Medium
* Is it accessible to students with limited python knowledge?
  + Python programming is not the main focus. But it does require students to have some idea about what some state-of-art pre-trained models are.
* How closely does this align with the lecture content?
  + This topic is not directly mentioned in the course.
* Will they likely have covered the required material by the time we get to this point
  + Yes, this lab is built upon the knowledge gained from Lab 5.2
* Does the code run correctly ?
  + Yes
* Feel free to add pointers and content:
  + Same process as lab 5.2 is needed to load the “Dog and cat” dataset from kaggle website
  + Train and test must be placed in proper directories so that they can be loaded.

**Ethic Question:**

1. How does Transfer Learning lead to a more balanced distribution of resources?
2. Should all state-of-the-art models be open-source?
3. Provide examples of some possible ethical issues in open-sourcing :

Open-source software (OSS) is a type of computer software in which **source code is released under a license** in which the copyright holder grants users the rights to use, study, change, and distribute the software to anyone and for any purpose.

# \*Exercises are added to the Collab Notebook