Ahmedabad University

CSE541 :- Computer Vision

Under Prof. Mehul Raval

AU2040123-Manthan Patel
AU2040010-Meet Patel
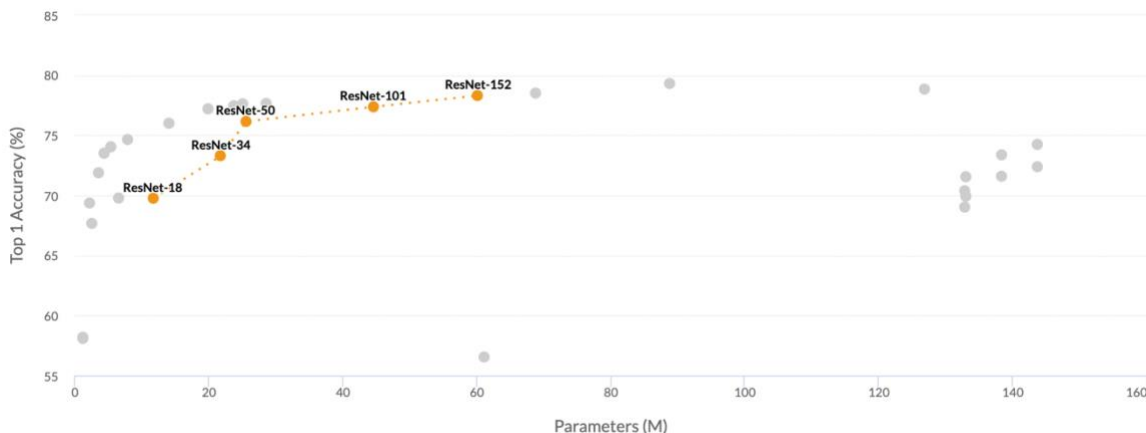AU2040056-Dev Patel
AU2040252-Sagar Bajaj

Group 8

Project title: Real time medical image disease detection using deep learning methods.

1. Task performed in this week

- We finalised the dataset for our project. We will use Hyper-Kvasir dataset.
- We researched the different architectures for our application and then finalised ResNet-152 architecture for our application.
- We read different articles and papers on the dataset and architecture.
- We explored various tools for the project such as Jupyter notebook, Google CoLab, PyCharm.

2. Outcomes of task performed

- The dataset we finalised is the following: https://datasets.simula.no/hyper-kvasir/
- The following are the references for the articles:
  - https://www.researchgate.net/publication/338090796_Hyper-Kvasir_A_Comprehensive_Multi-Class_Image_and_Video_Dataset_for_Gastrointestinal_Endoscopy
  - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8449743/
  - https://arxiv.org/pdf/2004.04989.pdf
  - https://www.sciencedirect.com/science/article/abs/pii/S1361841521003583
  - https://paperswithcode.com/lib/torchvision/resnet
  - Comparison of different version of ResNet.

3. Tasks to be performed in the upcoming week

- We will try to implement pre-train ResNet-152 architecture.
- We will study the dataset and decide the number of classes of diseases.