Project: Pokémon Type Classifier Project Proposal

Background-

Pokémon is a popular animated series which is filled with creatures called as Pokémon. These creatures are categorised into the following types- Normal, Fire, Water, Grass, Electric, Ice, Fighting, Poison, Ground, Flying, Psychic, Bug, Rock, Ghost, Dragon, Dark, Steel, Fairy (18 types total).

A Pokémon can be categorised to atleast one type, with maximum of two types. A Pokémon’s type is one of the central features of a Pokémon.

In the world of Pokémon, Pokémon type has implications for many other things, with physical appearance being one of them. A Pokémon’s type is instrumental in the design of the physical appearance of the Pokémon.

Problem-

To build an image classifier that takes the input of an image and gives us at least one of the types of Pokémon as the output.

Data Source-

Images will be scraped from PokemonDB.net as per the URLs obtained from- https://github.com/jtlaurel/Pokemon-Type-Classifier/blob/963e1863ba25253aec2faaa59fef52830bbed1e3/data/data\_final.csv

Network Architecture-

Considering the size of the dataset (around 5000), along with the complexity of the problem at hand ResNet18 will be used. To decrease computational cost, transfer learning approach will be taken.

Basic CNNs are not advisable for image classification and other models are too computationally expensive to train.