Class	:Machine Leaning II
Professor	:Amir Jafari, PhD.
Team	:Lilian Sao de Rivera, Swetha Kalla
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Subject	:Project Proposal

Project Proposal

RSNA Intracranial Hemorrhage Detection

Identify acute intracranial hemorrhage and its subtypes

Description of the problem

The purpose of the project is to detect the probability of any type of hemorrhage in the brain. A dataset with images of the brain will be used to identify the likelihood of bleeding. There are five types of hemorrhage: Intraparenchymal, Intraventricular, Subarachnoid, Subdural, and Epidural. However, the challenge asks to detect any hemorrhage that may appear on the scan. If there is hemorrhage that may seem important and it is not of the size and location of these types of hemorrhages, an "other type" classification will be awarded.

This problem is presented in the Kaggle competition. We aim to leverage relevant publications and kaggle sources to bring out the best model.

Motivation

This challenge was chosen to fulfill three objectives: learn to work with images and their interpretation, learn to handle information and competitions in Kaggle, and work with projects associated with medical outcomes. From these three objectives, the last one is the one that made all the difference. Using technology to help solve real medical problems is a challenge that is appealable to any researcher. Lately has been many advances in medicine that involve using the data in our bodies to create medicine that works with the unique features of our body. There is a cancer therapy that uses our immune system to develop antibodies to fight the malignant cells of some types of cancer. But the information that can be drawn from the body using high-resolution scans and DNA readings is massive; thus, learning how to deal with this information and how to predict favorable outcomes is a type of science worth working for.

Link to the dataset

https://www.kaggle.com/c/rsna-intracranial-hemorrhage-detection/data

Team members responsibilities

The list of all the tasks we aim to accomplish are: Configuring Cloud, Data Augmentation, EDA Analysis, Model Proposal, Model Creation, Ensembling the model, Hyperparameter Tuning, Model Evaluation, and Presentation and Report Creation.