**Group Members**

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**Project**

The purpose of the notebooks in this repository is to figure out the best way to use artificial neural networks to identify Disaster Tweets.

**Programming Language**

Python 3.x

**Machine Learning Libraries Used**

* Keras
* TensorFlow
* Pandas
* Matplotlib
* Scikit-Learn
* Seaborn
* NumPy
* KerasTuner
* SciKeras

**State-of-the-Art Model Used**

* Keras’ Inception v3

**Dataset**

* + NLP with Disaster Tweets - <https://www.kaggle.com/c/nlp-getting-started/data>
  + Dataset can be downloaded from Kaggle or operated on without downloading in a Kaggle notebook.

**How to run the code:**

Our project consists of 3 Jupyter notebooks you can run independently:

1. Supervised Learning with a Convolutional Neural Network to classify Disaster tweets dataset.
2. Unsupervsied Learning with a Pair of CNN and Word2Vec embeddings to generate fake text of tweets.
3. LSTM with transfer learning from an Inception V3 model to enhance classification accuracy of disaster tweets.