**Dog Emotion Image Classifier**

Adrian Posadas

Aiju Kinoshita

Jestoni Vasquez

Oscar Q. Guanoluisa

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**Project**

This project is part of COMP263 Final Project requirements. The goal is to create an image classifier to identify dog emotions. The project consists of an Implementation of training and prediction in Jupyter notebook.

**Install**

This project requires Python 3.x and the following Python libraries installed:

* Numpy
* Pandas
* Matplotlib
* Tensorflow
* Opencv-python
* Seaborn

**Data:**

Dataset can be downloaded in this location:

https://www.kaggle.com/datasets/danielshanbalico/dog-emotion

**Code:**

The code has 3 parts:

* Supervised Learning
  + A CNN was used to classify dog emotion images.
* Unsupervised Learning
  + A GAN was designed to generate new images for dog emotions.
* State-of-the-art Models
  + InceptionV3 was used to classify dog emotion images.

**Run:**

To run, open the notebook and run the entire code.