

# Matching The Art Work To The Artist.

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March 16, 2020

## 1 Introduction

Artwork is one of the most abstract ways of expressing oneself. As someone who is not a huge fan of art or very appreciative of it, I have always wondered how people distinguish between the styles of various artists and painters. To understand more about the analysis of paintings, I decided to implement a Machine Learning model to predict what painting belongs to which artist. The further scope for this, is to try paintings by random artist and generate a score on how much their artwork is related to work of certain other famous artists that are a part of the data set that I am working with.

## 2 Keywords

Important keywords associated with this project are:

- 1) Image Processing
- 2) Data Generation

## 3 Methodology

For this project I will be implementing Image Processing techniques using convolutional neural networks across multiple cores.

I will be using ResNet50 as a baseline architecture and try to build on it to visualise change in results.

The main questions that I will be looking to answer will be:

- Can I determine the artist from the given artwork?
- How does the training efficiency improve when processing is split across multiple cores?
- From the trained model can I build a used case to determine how closely a random artwork is related to a famous artist's

## 4 Dataset

- The source of the data is [Best Art Work of All Time - Dataset](#) from Kaggle.
- The size of the dataset is 2GB.
- This data set contains three files.
  - artists.csv: data set of information for each artist.
  - images.zip: collection of images (full size), divided in folders and sequentially numbered.
  - resized.zip: same collection but images have been resized and extracted from folder structure.