# DeepArt

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A Streamlit application that features the 49 most famous artists and their work, it will feature multiple different deeplearning models which are capable of doing different things

**Model -1 - Identify the Artist and Art Genre**

This model will help you, the user, to identify a painter. The working is as follows, user inputs a painting of his choice and the model will be able to 1. Classify if the it was already trained on this painting before, 2. Identify the genre ( once it sort of gets the artist ) or 3. Provides the classification probabilities to see which artist's art style it closely resemblems.

**Model-2 - What's in the painting?**

This is an unsupervised vision-to-text model that is trained on the images to generate descriptions of the painting, unless the painting is completely abstract in a general case a person would like to identify the content and a brief description of the painting.

**Model -3 - Style Transfer**

Let's say you like Vincent Vangogh's Art style and want to convert an image of a serene view to his art style, we can do this by applying the neural style transfer technique from a trained neural network on vincent's artworks and apply those to the images.

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**Application's Features**

The general catalogue section will feature, all the images, conditionally selected by the user either based on the timeline or or the artist name himself.

Timeline view

User can select a timeline ( discretised in the data ) and view all the paintings, their creators, genre, creator information and descriptions ( generated by the model).

Artist View

User can select the artist, and know all the paintings drawn by him in his lifetime. and view their genre and descriptions ( generated by the model)

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**Priortizing Work**

1. Work on the initial classification model.

    - Try multiple different models at once (pre-trained) and analyse the performance and use the best one.
    - A different model for genre classification ( refer kaggle )
2. Work on Style Transfer Model
    - not all the 49 people but hand pick two famous ones.
3. Work on the third and final model.

**Requirements**

- Might need to figure out S3 bucket to pull this off with the application. ( This will also be useful for datacenter )
- Search for an api that has these images and information? this way I don't need to store the entire 2gb image files on the git ( which anyways is not possible )

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