DATS 6203 Project Proposal
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Topic: Classifying Art Styles

Network: Convolutional Neural Network, Tensorflow or/and Pytorch

Dataset Description

This dataset (published on Kaggle) is scraped from google images, yandex images and rusmuseumvrm.ru. It contains five types of images :

1. Drawings and watercolours
2. Works of painting
3. Sculpture
4. Graphic Art
5. Iconography (old Russian arts)

The problem we would like to solve is classifying different styles of art. We wanted to do this project in order to gain experience applying CNN to images. The dataset is published on Kaggle platform and has 9000 images (581 MB), which is sufficient to train a deep network. We are going to use VGG16, Resnet, and Inception networks. We are going to use either Tensorflow or Pytorch for this project because there is enough online documentation and examples to help us learn and apply the necessary techniques.

Basically we will refer to these papers to implement the different CNN architectures:

VGG-16: https://arxiv.org/abs/1409.1556

Resnet: https://arxiv.org/abs/1512.03385

Inception: https://arxiv.org/abs/1409.4842

Since we are dealing with a classification problem we will use a confusion matrix, F1 score as well as accuracy.

Schedule

Our group is communicating regularly to progress the project, as well as in person meetings the following dates to achieve the listed milestones:

- **Sunday, April 7:** project plan outline, discuss core components of problem, setup technical components for collaborative coding
- **Sunday, April 14:** finalize slide presentation, assign components for presentation
- **Wednesday, April 24:** deliver final presentation