

## **New York Photo Verification**

Category: Application of Existing Technology to a New Use

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### **Motivation:**

We're looking to generate images that look like New York. These could likely fall into several categories, probably depending on our input images. Example types of images we might generate include skyline shots, street views, water photos, and sunset/sunrise pictures. The first model trained on these images could be used to guess whether a new input picture is actually from New York City. The second model could then try to generate semi-realistic photos that look like New York (though this is not a part of our proposal). Theoretically, this could be used to avoid copyright issues for those that want media of the city. You could generate unlimited shots and superimpose people or products or movie scenes.

### **Method:**

Our main idea is to identify images and determine if our image is New York City. This could be difficult as cities can often look very similar to one another. However hopefully with strong dataset and data processing we'll be able to classify somewhat reliably. Image classification can be done with a convolutional neural network. Another interesting model to use is open clip. Open clip allows us to train a model that is able to connect text to an image. Clip can also be used for image generation. This is done by using it in conjunction with another model like VQGAN. From what we've seen, our project is achievable. We hope to tackle one problem at a time. Image generation is the most daunting task but we're not the first to tackle it.

### **Experiment:**

We are going to use some screen captures from movies, in which the action takes place in the New York City, and see if it really was filmed there. In addition to that, as we know, many movies that supposedly take place in New York are filmed in Chicago or Toronto, so using our model could be helpful in assessing how good of a job the crew did making the set look like New York City given that we know that it was filmed elsewhere. We also hope to support the idea that every city has its own charm and 'face' which is not defined solely by world-famous landmarks, but also things like architectural styles, color choices, etc.