

McKay Bowcut

Project Proposal

Goal

Create a network that generates concept art from a given prompt. I would like to be able to use complete sentences, but if I have to settle for single words then that's alright.

Approach

I'm thinking the approach would use some kind of combination of an LSTM/GRU and a GANs network (although, admittedly I know very little about GANs, so I'm not totally sure how it fits in here.)

Measures of Success: First I would just like to generate an image that recognizably fits a prompt. Depending on how difficult this is, I would like to be able to combine multiple objects in one prompt, and then perhaps generate combinations of objects e.g. wolf + man = wolfman.

Available Resources

There is one company that is currently doing this: <https://www.artbreeder.com>. I may be able to see what kind of approach they are using for a good starting point. There are plenty of image datasets available for training purposes: CIFAR-10, Google's Open Image's, and Stanford Dog Datasets just to name a few. But I'm probably more interested in something that contains artwork, like The Paintings Dataset at ox.ac.uk, since I'm hoping to generate artwork.