

Research Project Proposal

Project Description:

Problems to be addressed:

Role-Playing Games (RPG) nowadays are becoming more and more popular. There is the technology to generalize the cartoon face from images to images, but the texts to images method seems haven't been proposal. In this project, we are trying to generalize the cartoon faces automatically depending on the players' setting.

Goals and objectives:

The main goal of this project is successfully generalizing the cartoon face images and also has good accuracy of the model.

Project Requirements:

The dataset of this project is scraped from the [Google Cartoon Set](#), which contains the described files and the cartoon face images.

Potential pitfalls & challenges:

This project will be based on the conditional GANs algorithm, which have not been used in this data set. The biggest challenge will be the accuracy of the result.

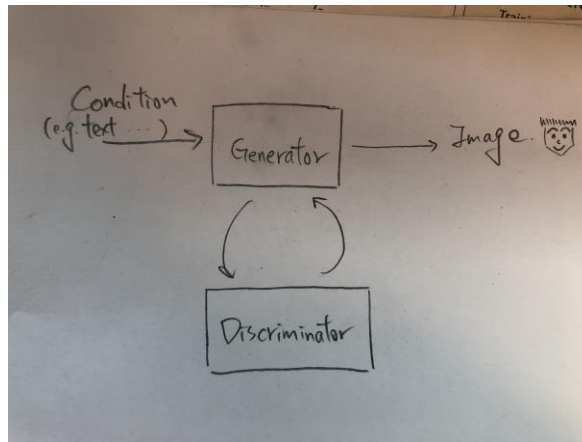
Background Research:

In order to approach the problem we addressed, we have to understand the basic knowledge about GANs, so the very first paper published by Ian J. Goodfellow [1] will be studied. Furthermore, the cGANs proposed by Mehdi Mirza and Simon Osindero [2] will also be carefully studied.

Algorithms and code sources:

Generative Adversarial Nets, Conditional Generative Adversarial Nets

Block Diagram of our system in more detail:



Data sources:

[Google Cartoon Set](#)

References:

[1] Goodfellow, I. J., Pouget-Abadie, J., Mirza, M., Xu, B., Warde-Farley, D., Ozair, S., Courville, A., and Bengio, Y. (2014). Generative adversarial nets. In NIPS'2014

[2] M. Mirza and S. Osindero. Conditional generative adversarial nets. arXiv preprint arXiv:1411.1784, 2014

Project members:

001443435 PinHo Wang