Seasons of Code: Why Hype the GAN's?
Report Documentation
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Brief Description

Yann LeCun described GANs as "the most interesting idea in the last 10 years in Machine Learning". And, indeed, Generative Adversarial Networks (GANs for short) have had a huge success since they were introduced in 2014 by Ian J. Goodfellow.This project involved learning many machine learning algorithms leading to GANs.

Learning during the project (in a chronological manner)

- Learned Deep Neural Networks and did many assignments to get to understand various models, hyperparameter tuning to a better extent following the Course Specialization- Deep Learning by Andrew Ng.
- Studied Convolutional Neural Networks and experimented with various models
- Studied various libraries for neural networks like TensorFlow, Keras, etc.
- Built first digit recognizer which achieves 98.2% accuracy and submitted for a Kaggle Competition.
- Read various articles on Medium to understand the structure and working of a GAN and completed the first Research Paper on GAN's by Ian Goodfellow.
- Built first deep convolutional GAN in TensorFlow following the tutorials.
- Started experimenting with GAN Models and tried training on CIFAR-10 dataset but it failed and the discriminator was having an accuracy of nearly 100%.
- Changed the dataset to MNSIT and started experimenting again. Results improved and I tried various ways of hyperparameter tuning.
- Finally, I made a GAN that generates Anime Faces and I trained the model on Kaggle Dataset.