Neural Style Transfer

NeuralArt - Stylize your Image

Avishi Gupta, Vaseem Naazleen, Shivangi Tomar

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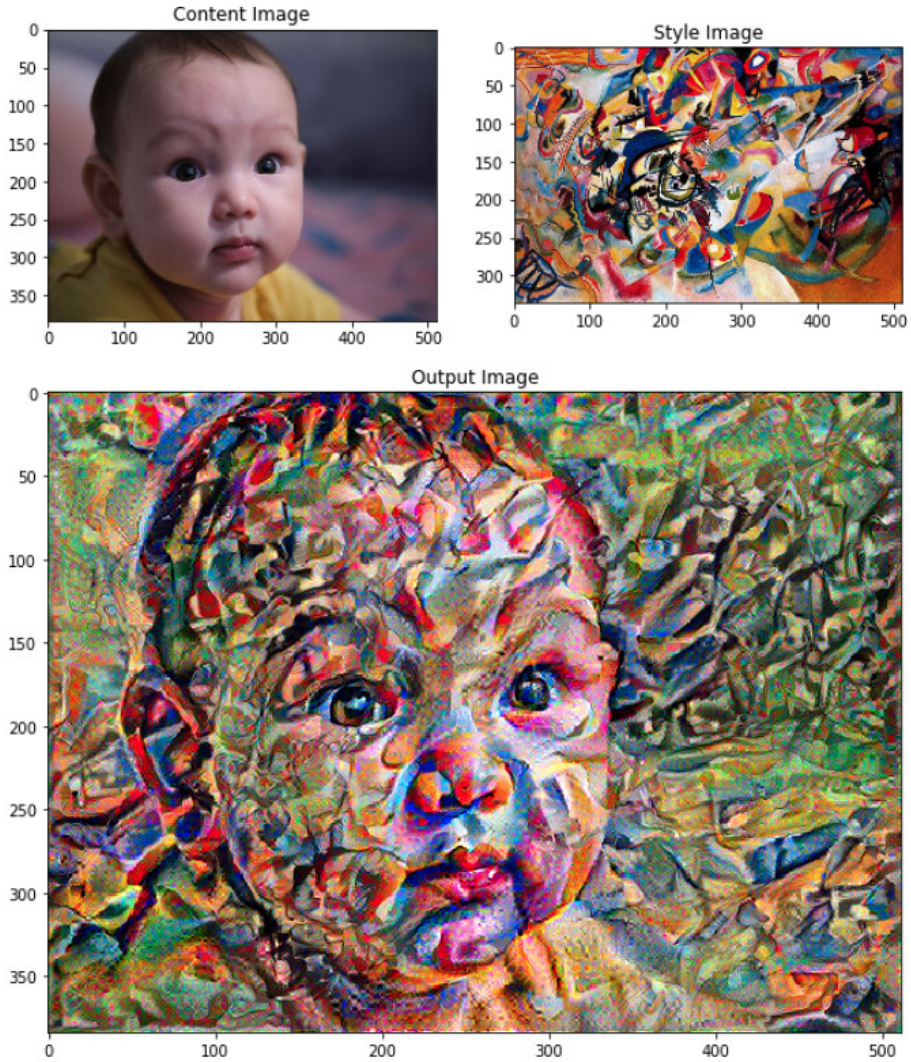
About us

Overview

Our project aims to stylize image by implementing A Neural Algorithm of Artistic Style paper by Leon A. Gatys, Alexander S. Ecker and Matthias Bethge.

https://arxiv.org/pdf/1508.06576.pdf

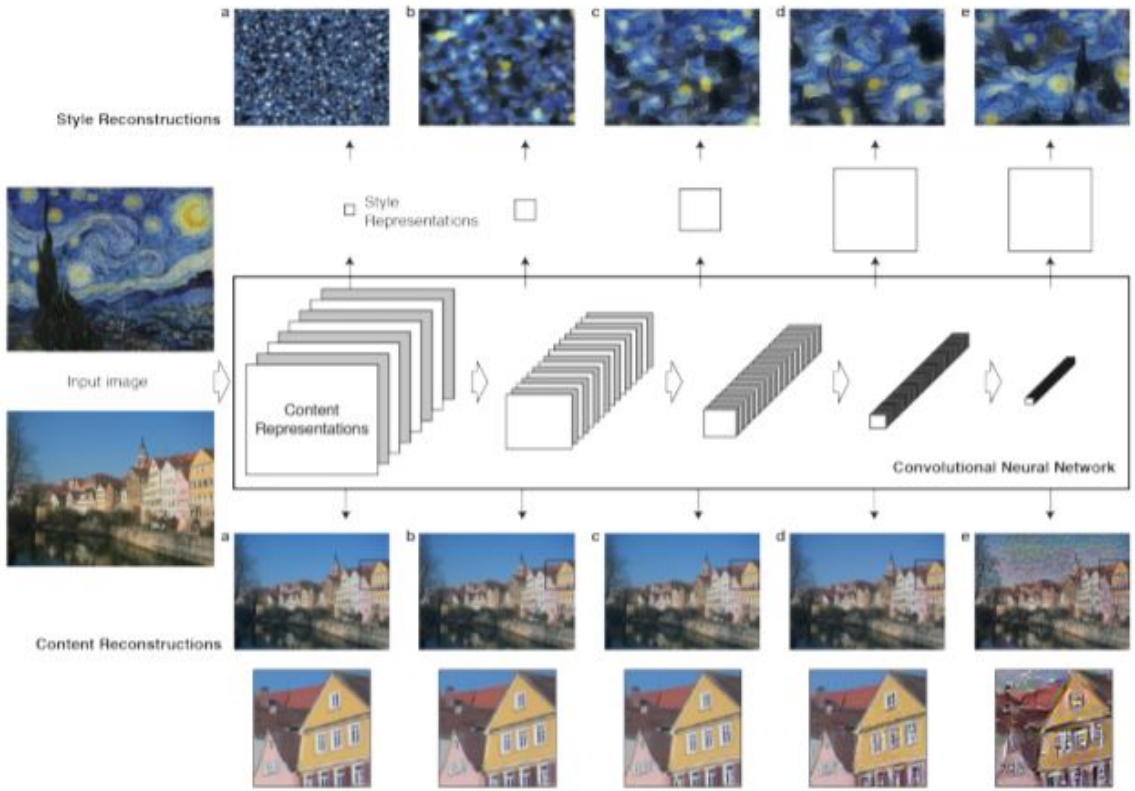
What is Neural Style Transfer?



What is Neural Style Transfer?

- Neural Style Transfer is an optimization technique.
- Input:
  - Content image
  - Style reference image
- Output:
  - Stylized image: looks like the content image, but painted in the style of the style reference image.

What is Neural Style Transfer?



Key Finding

The representations of content and style in the Convolutional Neural Network are separable.

Technical Stack

- Keras
- Tensorflow
- NumPy
- SciPy
- Matplotlib
- Flask

Status and Statistics

- Project completed
- Total lines of code: 1122
- Total number of commits: 210

Learnings

- Convolutional Neural Networks in deep learning
- Developing web application using HTML, CSS, JavaScript and Flask
- Version Control System
- Presentation using Beamer

Difficulties Faced

- The program was taking lot of time to output stylized image
- Allocating space for user images

Future Extensions

- Apply neural style transfer algorithm on videos
- Edit photos of different formats
- Photo editor- image enhancement, image manipulation, crop, rotate etc

Thank You!