

# Neural Style Transfer

## NeuralArt - Stylize your Image

26 September 2020

# About us



**Avishi Gupta**  
Computer Science and  
Design undergraduate at  
IIIT Delhi



**Shivangi Tomar**  
Computer Science  
undergraduate at NIT  
Karnataka



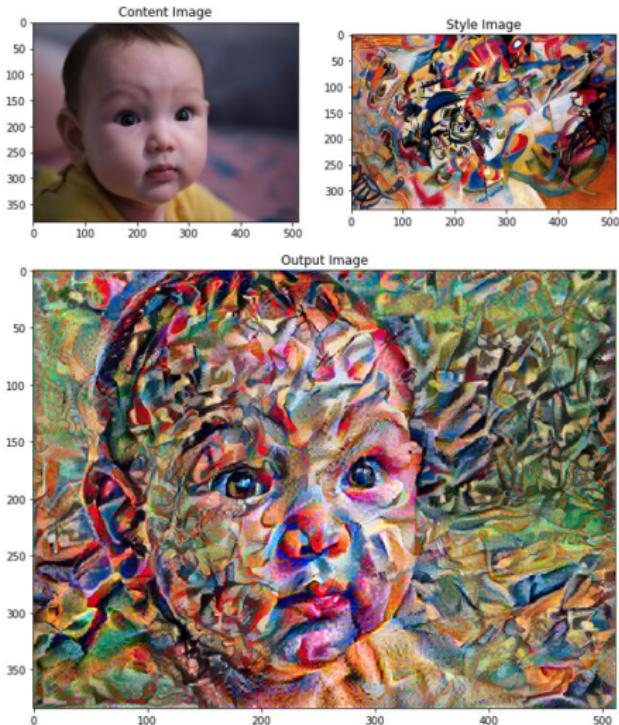
**Vaseem Naazleen**  
Computer Science  
undergraduate at VVIT,  
Andhra Pradesh

# 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>

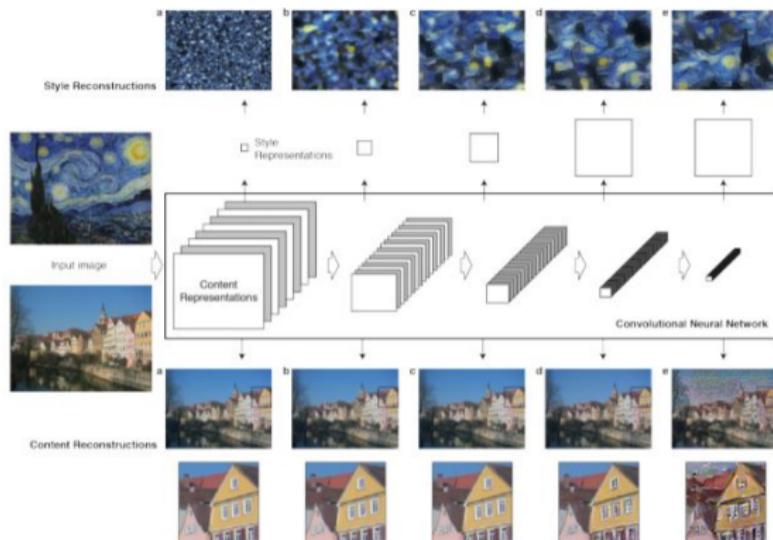
# What is Neural Style Transfer?



# 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

# Demo



# 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!