

# CHINMAYA LAD

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## ACADEMIC PROJECTS

### NEURAL STYLE TRANSFER 🔗

- Implemented a Neural Style Transfer model for performing artistic style transfer from an impressionist painting to normal image in **PyTorch**.
- Trained the model on **Perceptual Loss** calculated using **VGG-16** network trained for classification.
- Developed **Conditional Instance Normalization** for transferring multiple styles using single network.
- Used the same model for **real-time** artistic style transfer on a video input.

### IMAGE GENERATION USING SELF-ATTENTION 🔗

- Developed a Generative Adversarial Network with a Self Attention mechanism for generating artificial images in **PyTorch**.
- Compared the results with DCGAN using **Fr chet Inception Distance** as evaluation metric.

### MANGA COLORIZATION USING cGAN

- Developed an application for coloring black & white Manga images using Conditional Generative Adversarial Networks in **Keras**.
- Implemented **U-Net** architecture along with skip-connections for the generating the colored images and **Patch-GAN** architecture as discriminator between the colored image and the real image.

### AMAZON DYNAMO STYLE STORAGE 🔗

- Designed a distributed **key-value** storage system using Android emulators as distributed servers.
- Implemented **Partitioning**, **Replication** and **Failure handling** to provide **Linearizability** and **Availability** at same time.

### KEY THRESHOLDING 🔗

- Implemented **Shamir's Secret Sharing Algorithm** for key thresholding using **Lagrange's Interpolation** and **Elgamal Encryption** as encryption base.

## EXPERIENCE

### SOFTWARE DEVELOPER

#### Mirraw Online Services

📅 Nov 2016 – June 2018    📍 Mumbai, India

- Examined server-side security vulnerability and feature development on **Ruby on Rails** framework.
- Ownership of Android Development, improved feature usability and implemented UX enhancement for the application
- Optimized GPU rendering performance leading to improved play-store ranking of the app.
- Restructured code base for better performance and minimized code redundancy.
- Introduced modular approach and proper coding standards in project for re-usability and understanding.
- Revamped and Developed Application UI.

### DEVELOPMENT INTERN

#### e-Yantra, IIT Bombay

📅 May 2015 – July 2015    📍 Mumbai, India

- Developed "Fireblocks" (Embedded Programming Tutor).
- Implemented Web application using **PHP Laravel Framework** along with Google's **Blockly Library**.
- Implemented server-side code generation and compiling mechanism.

## EDUCATION

Master of Science (Computer Science)

[University at Buffalo](#)

📅 Aug 2018 – Feb 2020    📍 Buffalo, NY

Bachelor of Engineering (Computer Engineering)

[University of Mumbai](#)

📅 Aug 2012 – July 2016    📍 Mumbai, India

## COURSES

Machine Learning

Deep Learning

Computer Vision

Distributed Systems

Computer Security

## TECHNICAL SKILLS

- Java, Python, Ruby, and C.
- Pandas, Numpy, Scikit-learn.
- PyTorch, Keras, Tensorflow.
- Crypto, OpenCV, Pillow.
- Ruby on Rails, Laravel, Django.
- SQL, MySQL, PostgreSQL.

## SOFTWARE SKILLS

- Eclipse
- Android Studio
- Linux OS (Fedora/Ubuntu/CentOS)

## ACHIEVEMENTS

- 🏆 **1<sup>st</sup> place in e-YRC 2015**
- 🏆 **1<sup>st</sup> place in e-Yantra Robotics Competition** for theme Warehouse Management organized by e-Yantra, IIT Bombay.