

CHINMAYA LAD

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ACADEMIC PROJECTS

MANGA COLORIZATION USING cGAN

- Developed an application for coloring black & white Manga images using Conditional Generative Adversarial Networks.
- 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.

EXPLAINABLE AI

- Developed an architecture that learns **explainable features** from writers' handwriting domain while learning to answer various queries for that domain.
- The architecture consists of combination of deep learning model along with probabilistic graphical model.
- The deep learning model is an **Auto-Encoder** which provides **latent representations** of the handwriting samples which are then used to predict the explainable features of the samples.

CLASSIFICATION OF HANDWRITTEN DIGITS

- Implemented Logistic Regression, Neural Network, Random Forest and SVM methods and combined them using boosting technique on MNIST dataset for training and testing.
- Tested the model on USPS dataset to validate "No Free Lunch Theorem".

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

TECHNICAL SKILLS

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

SOFTWARE SKILLS

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

ACHIEVEMENTS

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