CHINMAYA LAD

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PROJECTS

NEURAL STYLE TRANSFER 🔗

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

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

Deep Learning Research
University at Buffalo

📅 June 2019 – Dec 2019 📍 Buffalo, NY

- Developed a Semi-Supervised Segmentation technique using Adversarial loss for Medical Image dataset, to deal with the lack of properly labeled data.
- The segmentation architecture uses DeepLabV3 model trained alongside an adversarial **Multiscale L1 Loss** in PyTorch.
- Achieved a F1 score of 94.2% on Mouse Kidney Dataset for glomureli detection.

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 an improved play-store ranking of the app.
- Restructured the code base for better performance and minimized code redundancy.
- Introduced a modular approach and proper coding standards in the project for re-usability and understanding.

Developer 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

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