

RAMA KRISHNA PINNIMTY

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EDUCATION

Master's Computer Science | Virginia Tech | Blacksburg, Virginia | **GPA: 4.0/4.0** May 2023

Coursework: Data Analytics I, Machine Learning with Big Data

Bachelor's Computer Science and Engineering | IIIT Bhubaneswar | Bhubaneswar, IN | **GPA: 8.38/10** Jun 2019

SKILLS

ML: OpenCV, Scikit-learn, Keras, TensorFlow, PyTorch, NLTK, Nvidia CUDA

Web & Databases: HTML, CSS, Bootstrap, React, Express.js, Node.js, Flask, HTTP, DOM, MySQL, MongoDB

Programming: Python, Java, JavaScript, C, C++

Others: Unit Testing, RESTful API, Git, Docker, JSON, Linux, LaTeX, Postman

EXPERIENCE

Research Engineer, Software & ML | Living Analytics Research Centre | Singapore Aug 2019 – Apr 2021

- Developed [Facial-Weight-Visualizer](#) to utilize state-of-the-art Deep Generative model StyleGAN for generating high-quality facial images that reflect a person's health status.
- Implemented an enhanced Image2StyleGAN encoder for StyleGAN1 and StyleGAN2 models with ResNet initialization and evaluated on Amazon Mechanical Turk (AMT). (*Python, Dlib, OpenCV, Keras, TensorFlow*)
- Designed the [webapp](#) with Vue.js frontend and Flask backend to produce results in just **under a minute**.
- [Published](#) research 'Transforming Facial Weight of Real Images by Editing Latent Space of StyleGAN' at TETCI'20.

AI Resident | One Fourth Labs | Chennai, IN (Remote) May 2019 – Jul 2019

- Worked on [Font-style Transfer for Devanagari Glyphs](#) using Deep Convolutional Style Encoder-Content Decoder, Mixer and Generator networks.
- Implemented the models using PyTorch and designed the webapp using Streamlit framework.

Research Intern | IIIT Delhi | New Delhi, IN Dec 2018 – Apr 2019

- Developed [FaceFetch](#): an interactive, efficient and scalable Face Retrieval Framework for Large-scale databases.
- Implemented GoogleLeNet with Triplet loss, Approximate Nearest Neighbor Graph (ANNG) from Yahoo's NGT library and Rocchio algorithm with Active Selection using Python, Keras and TensorFlow.
- Designed the UI using HTML/CSS, Bootstrap, JavaScript, jQuery, JSON and Gramex.
- The framework successfully fetched the user-envisioned image from over **200K** images in under **3** minutes.

Software Developer Intern | First American India | Hyderabad, IN Jun 2018 – Aug 2018

- Developed ML pipeline to detect, classify and remove watermarks from OCR documents with **minimal** information loss.
- Used OpenCV Canny Edge Detection algorithm, CNNs, Tkinter GUI and PythonMagick for efficient Image Compression.
- Fully automated the process to accommodate processing over **12** million documents, reduced the overall time taken to process a single document from few hours to **2** minutes and saved the company over **100K** USD.

PROJECTS

Sentiment Analysis for Online Safety

- Explored *Sentiment-140* dataset that has **1.6M** records & generated **50K** features using TF-IDF Vectorizer. Achieved a F-1 score of **90%** using LSTM network implemented using NLTK, Scikit-learn, Keras and TensorFlow.
- Currently working towards integrating the model into a browser extension to identify and flag toxic tweets in real-time.

Apparel Recommendation System

- Built a Content-based Recommendation System using product images and text description. (*Word2Vec, TF-IDF, CNN*)
- Scraped the data for **1.8M** products with **20+** features using Amazon API and BeautifulSoup and performed A/B Testing.

Stock Market Prediction for Indian Markets

- Developed a Differential Evolution (DE) based Functional Link Artificial Neural Network (FLANN) model to predict daily, weekly, monthly and yearly prices of stocks for a given company.
- Won** the DELL CodeFest'17 hackathon for showcasing our models and results to predict Dell Inc.'s stock.

Hindi Language Character Classifier

- Implemented a custom and robust Convolutional Neural Network (CNN) using Scikit-learn and Keras.
- Achieved an accuracy of **99%** for classifying various Hindi characters even with noise and alterations in images.

ACHIEVEMENTS & ACTIVITIES

- Secured **3rd** position and won a **cash prize of 10,000 INR** for my work on 'Classification of Pluripotent genes using Machine Learning Techniques' at ACM Compute in 2018.
- Selected to **represent India** at HPAIR (Harvard College Project for Asian and International Relations) Asia'19 and Harvard'20.
- One of the **1000** students nationwide to clear AMTI (Association of Mathematics Teachers of India) Olympiad in 2011.
- Teaching Assistant** for the course 'A First Course on Deep Learning' offered online by PadhAI in 2019.
- Published articles through my [Blog](#) on Medium related to Data Science and technology.
- Volunteered at Indian Red Cross Society (IRCS), Hyderabad to raise funds, organize blood donation camps and conduct sessions on maintaining good personal hygiene. (*2 years*)