ADITYA ANULEKH MANTRI

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EDUCATION

University of Southern California — **Los Angeles, CA**
Master of Science in Electrical and Computer Engineering – Machine Learning and Data Science — Anticipated May 2023
Relevant Coursework: Deep Learning (Mentor), Machine Learning, Data Structures and Algorithms — GPA 3.72/4

Mahindra Ecole Centrale — **Hyderabad, Telangana, India**
Bachelor of Technology in Electrical and Electronics Engineering — September 2020
Relevant Coursework: Machine Learning, Deep Learning, PDE Based Image Processing — GPA 3.7/4 (8.95/10.0)

SKILLS

- **Programming Languages**: Python, C++, C, Node.js MATLAB, Bash
- **Frameworks**: PyTorch, TensorFlow, OpenCV, mmdetection, pandas, scikit-learn, numpy, scipy, Amazon Web Services, Docker, Google Cloud Platform, Git, Django, Flask, Bazel, GTest, Apache Kafka, SQL, d3.js
- **Artificial Intelligence**: Classical Machine Learning, CNNs (ConvNet architectures), Generative Models (DCGAN, CycleGAN), Object Detection (Faster R-CNN, YOLO), Image Processing, Clustering Algorithms (KNN, K-Means, GMMs)
- **Hardware**: Arduino, STM32, Raspberry Pi

PROFESSIONAL EXPERIENCE

NVIDIA Corporation - System Software Engineer Intern, ML and Robotics, Santa Clara, CA — May 2022-August 2022
- Developed an end-to-end Intelligent Video Analytics application that goes all the way from computer vision to generating business insights using C/C++ and Python
- Trained multiple computer vision models for detecting, tracking people and classifying their behavior in retail scenarios
- Built a dashboard to translate CV inference data to graphs and numbers to showcase various KPIs using Django
- Produced multiple repositories and blogs to accelerate adoption of DeepStream SDK in the industry

Hardware Accelerated Learning USC - Research Assistant, Los Angeles, CA — January 2022-May 2022
- Investigating and developing fixed point representations in the logarithmic domain to approximate multiplications with additions for faster training neural networks without significant loss in accuracy

Jocata Financial Advisory and Technology - Machine Learning Engineer, Hyderabad, Telangana, India — January 2020-July 2021
- Developed and deployed time-efficient CNNs and LSTMs based computer vision applications for smartphones with over 95% accuracy for optical character recognition (OCR) of IDs and bank statements
- Enhanced performance of existing face match neural networks by 20% by employing denoising and deblurring techniques
- Slashed over 1000 hrs. of workforce by developing suggestion-based data annotation pipelines for training and retraining of neural networks

Mahindra & Mahindra - Machine Learning Intern, Chennai, Tamil Nadu, India — May 2019-July 2019
- Devised speaker recognition system for automobiles using Mel Frequency Cepstral Coefficients (MFCC) and K-Nearest Neighbors
- Prototyped cocktail party algorithm using Independent Component Analysis (ICA) for enhanced call quality on a Raspberry Pi using Python

ACADEMIC PROJECTS

Generating Paintings from Photographs Using Generative Adversarial Networks — Fall 2021
- Implemented CycleGAN architecture in PyTorch to learn and transfer Monet style of painting to photographs. The generated photographs achieved a Fréchet Inception Distance (FID) less than 60 on Kaggle

Partial Differential Equations for Edge Detection in Images — Spring 2020
- Implemented an edge detection model based on curve-evolution in MATLAB to detect edges of objects in an image that are not clearly defined by a gradient
- Expedited the rate of convergence by a significant amount as compared to gradient based edge detectors

Warehouse Optimization using Generative Adversarial Networks — Fall 2019
- Designed and developed GANs in TensorFlow for predicting future generations of products for warehouse storage optimization

ACHIEVEMENTS

- **Spot Awardee for excellent project implementation,** Jocata Financial Advisory and Technology — May 2021
- **TensorFlow Developer Certified**, Google — October 2020