RUGVED MHATRE

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EDUCATION

New York University, Tandon School of Engineering | Brooklyn, NY Sep 2023 – May 2025

Master of Science in Computer Engineering | GPA – 3.7/4.0

Coursework – Deep Learning, Advanced Machine Learning, Introduction to Machine Learning, Parallel and Customized Computer Architecture, Computing Systems Architecture, Data Structures and Algorithms

University of Mumbai, Dwarkadas J. Sanghvi College of Engineering | India Aug 2016 – Oct 2020

Bachelor of Engineering in Electronics Engineering | GPA – 3.6/4.0

Coursework – Neural Networks, Database Management Systems, Digital Image Processing, VLSI Hardware Design

EXPERIENCE

Sr. DevOps Engineer (Staff Consultant) | Oracle Financial Services Software Sep 2022 – Jun 2023

- Led a team in the development of a Natural Language Processing model (BERT) designed to identify application bugs through analysis of user comments
- Developed and deployed caching logic to streamline script performance, successfully slashing execution times by an average of 15 minutes across over 100 scripts
- Implemented a concurrency algorithm for the execution of test cases and stress-tested our servers with more than 200 sessions at a time, achieving an exceptional 72 hours reduction in the total testing time of 471 test cases

DevOps Engineer (Associate Consultant) | Oracle Financial Services Software Oct 2020 – Sep 2022

- Developed a novel customer origination tool, resulting in a significant reduction of a 2-hour task to just 0.5 hours
- Streamlined execution workflow, reducing 30% waiting time by improving the queuing logic to handle execution priorities and resource interdependencies
- Consistently acknowledged as a top performer thrice, with recognition from peers and client for exemplary work

PROJECTS

Multimodal Sentiment Analysis

- Conducted research on Multimodal Sentiment Analysis methodologies, emphasizing fusion techniques to amalgamate information from various modalities (audio, text, visual) for improved sentiment analysis performance
- Explored Early Fusion Transformer, Late Fusion Transformer, alongside innovative approaches such as Multimodal Transformer, and Tensor Fusion Models

Continual Learning for Autonomous Vehicles

- Developed Continual Learning models, focused on real-time prediction of steering angles using image data
- Explored strategies such as Elastic Weight Consolidation, Experience Replay, and Temporal Consistency Regularization for autonomous vehicle navigation

ResNet for Image Classification on CIFAR-10 Dataset

- Implemented ResNet-34 model for CIFAR-10 image classification, achieving a test accuracy of 95.37%
- Explored various ResNet architectures, dropout layers, and learning rate schedulers to optimize model with rigorous training methodologies

Predictive Analysis of Diabetes within the PIMA Indian Population

- Conducted predictive analysis on diabetes occurrence within the PIMA Indian population as part of the NYU Data Science bootcamp
- Utilized machine learning techniques like K-Nearest Neighbors to analyze a comprehensive dataset, uncovering correlations and patterns to enhance predictive accuracy

Vector Processor Functional and Performance Simulators

- Developed Python-based Vector Processor Simulator project to simulate functionality and performance
- Created a comprehensive test bench, including Dot Product, Fully Connected Layer, and Convolutional Layer

LEADERSHIP & VOLUNTEERING

- Provided tutoring sessions in AP Computer Science to a high school student
- Trained more than 70 students on the Software Developer recruiting process at my undergraduate university
- Instructed 5 undergraduate recruits at Oracle, conducting knowledge-sharing sessions on an overview of the codebase and the proprietary tools and technologies in use