

# RUGVED MHATRE

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## EDUCATION

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

Master of Science in Computer Engineering | GPA – 3.44/4.0

Coursework – Parallel and Customized Computer Architecture, Computing Systems Architecture, Advanced Machine Learning, Deep Learning, Machine Learning, 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 – VLSI Design, Digital Image Processing, Database Management Systems, Neural Networks

## EXPERIENCE

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

- Developed a novel customer origination automation, resulting in a significant reduction of a 2-hour manual task to just 0.5 hours.
- Implemented a caching logic that optimized the performance of all scripts, resulting in a reduction of 15 minutes in execution time and increasing throughput by 200%
- Consistently acknowledged as a top performer for three months, with recognition from both peers and client for exemplary work.

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

- 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
- Designed an efficient algorithm by implementing a concurrency logic to transfer files over the network, thereby improving the speed of database backups by 50%
- Streamlined execution workflow, reducing 30% waiting time by improving the queuing logic to handle execution priorities and resource interdependencies

## PROJECTS

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### MIPS 5-Stage Pipelined Processor Simulator

- Developed a MIPS 5-stage pipelined processor simulator using C++, enabling comprehensive understanding and analysis of pipeline hazards and performance bottlenecks
- Conducted thorough testing and validation of the simulator against various instruction sequences and corner cases, verifying correct behavior and identifying potential issues for refinement

### Visual Servoing system of an Autonomous Vehicle in CARLA Simulator

- Implemented a visual perception module by training a deep learning U-Net model on TensorFlow for semantic image segmentation to estimate the drivable surface with an accuracy of 96% on test dataset
- Extracted lane markings by analyzing the drivable surface using Canny Edge Detection and Hough Line Transform algorithms to localize the ego vehicle in the environment

### Pong Game in Assembly

- Programmed on x86 ISA, utilized processor interrupts to generate computer graphics, read system clock and keyboard inputs, to create a Pong Game with single-player and two-player options and 3 UI Screens

### Handwritten Digit Recognizer using a simple Neural Network

- Developed a neural network using NumPy to identify handwritten digits from MNIST dataset with 88% accuracy

## SKILLS

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**Languages:** Python, Java, C/C++, Bash Shell Scripting, SQL, JavaScript

**Technologies:** Jenkins, Git, Oracle Database 19c, Linux, Oracle Cloud, PyTorch, TensorFlow, MATLAB

## LEADERSHIP & VOLUNTEERING

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- Administered accounts and arranged independent events as the Treasurer for D. J. Sanghvi IEEE Student Chapter
- Trained 70 college students on the Software Development job interview process in undergraduate college
- Instructed 5 recruits at Oracle, conducting knowledge-sharing sessions on an overview of the codebase and the proprietary tools and technologies being used in the project