

# RUGVED MHATRE

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## EDUCATION

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**Dwarkadas J. Sanghvi College of Engineering (University of Mumbai)**

Aug 2016 – Oct 2020

Bachelor of Engineering (Electronics Engineering) | GPA – 8.34/10.00

Relevant Coursework – Applied Mathematics, Object Oriented Programming, Computer Organization and Architecture, Real-Time Operating Systems, Database Management System, Neural Networks and Fuzzy Logic, Digital Image Processing

## EXPERIENCE

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**Staff Consultant (DevOps) | Oracle Financial Services Software (OFSS), Mumbai**

Sep 2022 – Present

- Leading a two-member team to design and implement an NLP Text Classification Model to automate the manual task of assigning application bugs to relevant developers based on the incident descriptions in testing reports
- Researching and developing a self-healing infrastructure that continuously analyses the platform using light-weight background processes and troubleshoots issues across 320 VMs to improve the reliability of our services
- Refactoring Linux Bash scripts to OS-independent Python programs for performance improvement in the development pipeline

**Associate Consultant (DevOps) | Oracle Financial Services Software (OFSS), Mumbai**

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%
- Developed a checksum algorithm for file transfers over the network, resulting in improved data integrity by 100%
- Created scripts for database installation, configuration, and cloning, resulting in 80% fewer time delays and reducing the dependency on the database team
- Streamlined execution workflow, reducing 30% waiting time by improving the queuing logic to handle execution priorities and resource interdependencies
- Integrated an incremental computing algorithm for Oracle Policy Store, saving 67% of deployment time

## TECHNICAL PROJECTS

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

Apr 2020

- Implemented a visual perception module by training a U-Net model on TensorFlow for semantic image segmentation to estimate the drivable surface with an accuracy of 96% on training and 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
- Identified traffic signs and signals with 98% accuracy using a Convolutional Neural Network model on TensorFlow

**Handwritten Digit Recognizer using a simple Neural Network**

Dec 2019

- Developed a neural network using NumPy arrays to identify handwritten digits from  $28 \times 28$  pixels grayscale images
- Implemented a 784-neuron input layer, a 10-neuron hidden layer, and a 10-neuron output layer achieving 88% accuracy on training and test dataset

**Pong Game in Assembly Language on x86 Architecture**

Apr 2018

- 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
- Implemented three UI screens – the main menu, a game screen, and a final-score screen using assembly procedures

## SKILLS

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**Languages:** Python, Java, C, Bash Shell Scripting, Expect Shell Scripting, SQL

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

## 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 five recruits at Oracle, conducting knowledge-sharing sessions on an overview of the codebase and the proprietary tools and technologies being used in the project