

Deep Paresh Dodhiwala

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EDUCATION

University of Southern California (USC)

Los Angeles, CA

Master of Science in Computer Science, CGPA: 3.71/4

Aug. 2022 – May 2024

Courserwork: Analysis of Algorithms, Operating Systems, Machine Learning, Database Systems.

Sardar Patel Institute of Technology

Mumbai, India

Bachelor of Technology in Information Technology, CGPA: 9.5 / 10

Aug. 2018 – May 2022

TECHNICAL SKILLS

Languages: Python, Java, C, C++, JavaScript, C#, Bash, HTML, CSS, PHP, TypeScript.

Frameworks/Tools: Git, Springboot, Flask, Angular, React.js, Node.js, GraphQL, Docker, AWS, Tableau, Jenkins.

Databases: MySQL, Oracle, PostgreSQL, MongoDB, Firebase, phpMyAdmin, Amazon Dynamo DB.

Libraries: Numpy, Pandas, TensorFlow, PyTorch, Keras, Plotly, Matplotlib.

EXPERIENCE

Research Programmer

Sept. 2023 – Present

Autonomous Networks Research Group (ANRG)

Los Angeles, CA

- Researched and Implemented task graph scheduling algorithms (**Min-Min and Sufferage**) for distributed computing environment within the SAGA (Scheduling Algorithms Gathered) project.
- Improved task execution efficiency and load balancing by incorporating financial constraints using **E-HEFT**.

Data Science Intern

Oct. 2021 – Nov. 2021

Globalshala, in collaboration with Saint Louis University

Mumbai, India

- Analyzed statistical information of the firm's ad campaigns based on **Facebook Data** - Cost Per Click, Click-Through Rate, Cost Per Result and Average Unique Clicks.
- Extracted valuable insights from these data measures and proposed to optimize campaign performance by discontinuing **20%** of the least profitable campaigns using **Tableau** and **Scatterpolar**.

Software Engineering Intern

May 2021 – July 2021

JPMorgan Chase

Mumbai, India

- Worked on **Asset Record Software**- computes and stores net holdings of a legal entity.
- Enhanced Asset Record's End-Of-Day functionality by analyzing the current design and suggested modifications to include SubLine-Of-Business for a particular legal entity.
- Suggested critical code changes in **Spring Boot** and database structure modifications to **Apache Cassandra** to achieve the desired goals.

PROJECTS

Intelligent Call Prioritization Using Speech Emotion Recognition | *Python, Anvil, Git*

- Led a group of 3 to build a website using **Anvil** that uses a short voice note of waiting callers and prioritizes calls based on emotion predicted through speech and transcribed text.
- Deployed BERT model for **textual analysis** and Random Forest Classifier for the **Speech Emotion Recognition** for the best results.
- The combined model achieved an overall accuracy of **92%** and with average waiting time of **30 seconds**, a **1.5x** improvement on the standard scheduling algorithms.

Weenix Operating System | *C, Git*

- Implemented core Operating System functions using kernel programming in C such as **Processes, Threads, Virtual File System** and **Virtual Memory**.
- The OS cleared all the stress tests like Mem-eating kernel and fork-bombing 500 processes.

Diabetes Prediction System | *Python, Flask, HTML, CSS*

- Developed a web-based application to determine probability of having diabetes using Artificial Neural Network.
- Conducted **exploratory data analysis** and **data mining** using **Pandas** to build a robust prediction model.
- Constructed the Neural Network using TensorFlow which obtained a training accuracy of **93.48%** and testing accuracy of **87%**.

Eggshub | *Angular, Node.js, MongoDB, Plotly*

- Led a group of 6 to develop a specialized website focused on egg-based statistics (Code For Good)
- Created a website to display the data metrics through interactive choropleth world maps that could effectively display export and import statistics related to eggs in an effective manner using **Plotly**.