Deep Paresh Dodhiwala

213-561-7036 | Email | LinkedIn | Github | Portfolio

Education

University of Southern California (USC) — Los Angeles, CA
Master of Science in Computer Science, CGPA: 3.75/4 — *Aug. 2022 – May 2024*
Courserwork: Analysis of Algorithms, Machine Learning, Deep Learning and its Applications, 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: Git, Spring Boot, .NET, Jira, Angular, PyTorch, React.js, Node.js, AWS, Jenkins, REST API, Docker.
Databases: MySQL, Oracle, PostgreSQL, MongoDB, Firebase, phpMyAdmin, Amazon Dynamo DB.
Libraries: Numpy, Pandas, TensorFlow, Plotly, Matplotlib.

Experience

Algorithm Developer — 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 Engineer Intern — May 2021 – July 2021
JPMorgan Chase — *Mumbai, India*
- Enhanced **Financial Asset Record Software** by analyzing and recommending innovative modifications to incorporate Sub-Line-Of-Business as an independent component during End-Of-Day functionality.
- Proposed and executed critical code changes in **Spring Boot** and database structure modifications in **Apache Cassandra** to ensure accurate and efficient operations.

Projects

Text-Based Active Reinforcement Learning | *Python, PyTorch, Git*
- Developed a Reinforcement Learning (RL) agent using **Stable Baselines3** to interpret and execute text-based instructions for navigating in a Mario Game within the OpenAI Gym Environment.
- Optimized and fine-tuned **Llama 3 8B** using LoRA to generate various reward functions of the RL model.
- Improved the completion time by **5x** and final score by **1.4x** than the baseline reward function.

Intelligent Call Prioritization Using Speech Emotion Recognition | *Python, Anvil, Git*
- Built 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 an average waiting time of **30 seconds**, a **1.5x** improvement on the standard scheduling algorithms.

Diabetes Prediction System | *Python, Flask, HTML, CSS*
- Developed a web-based application to determine probability of having diabetes using Artificial Neural Network.
- Conducted extensive **exploratory data analysis** and **data mining** 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%** an improvement on the existing prediction algorithms.

Eggshub | *Python, Plotly, MongoDB, Angular, Node.js*
- Led a team of six to create a specialized platform providing comprehensive insights into egg-related data for a non-profit organization (Code for Good Hackathon).
- Designed an interactive website to visually present global export and import statistics of eggs through dynamic chloropleth world maps using **Plotly**, enhancing data accessibility and interpretation.