PARTH DHARMENDRA PRAJAPATI

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EDUCATION

University of Southern California — Los Angeles, California
Master of Science in Computer Science — August 2023 - May 2025

- Relevant Courses: AI, Machine Learning for Data Science, Analysis of Algorithm, Database Systems, Web Technologies

University of Mumbai — Mumbai, India
Bachelor of Engineering in Information Technology — August 2019 - May 2023

- Achieved a GPA of 9.19 out of 10
- Relevant Courses: Machine Learning, Web Development, Operating System, Big Data Analytics, Natural Language Processing

SKILLS

- Programming languages: Python, JavaScript, Java, R, C
- ML Libraries: Scikit-learn, PyTorch, NumPy, Matplotlib, Pandas, Keras, TensorFlow, LangChain
- Web Technologies: React, Node.js, Express.js, AJAX, MongoDB, MySQL, HTML, CSS, Flask, Streamlit, AWS
- Soft Skills: Problem Solving, Critical Thinking, Leadership, Teamwork, Communication, Time Management, Adaptability

PROFESSIONAL EXPERIENCE

Vayu Technology Corp. — Los Angeles, California
Data Science Intern — August 2024 - Present

- Developed algorithms for the Equilibrium System, analyzing sensor data to enhance system performance using Python
- Designed advanced logic for Pocket TUG, pushup, endurance run, and walk, identifying key patterns and critical signal points
- Built an efficient and reliable threshold model for calibration checks across body segments, improving overall sensor accuracy
- Collaborated closely with the team, documenting work, and sharing detailed progress for clear and effective communication

University of Southern California — Los Angeles, California
Lead Course Producer (ISE 583: Enterprise-Wide Information Systems, Spring 2025) — August 2024 - Present
Teaching Assistant (ITP 259: Basics of Artificial Intelligence, Fall 2024)

- Graded assignments, responded to inquiries, and supported the professor for 30 students in ITP 259 and 58 students in ISE 583
- Led doubt sessions, tested assignments, and ensured smooth course delivery, providing academic support for both courses
- Managed ISE 583 course logistics, collaborating with the professor and 2 course producers to ensure effective class facilitation

The Sparks Foundation — Mumbai, India
Data Science and Business Analytics Intern — October 2022 - November 2022

- Built a hybrid stock price prediction model with Random Forest Regressor, outperforming the least performing model by 50%
- Applied Random Forest, Decision Tree, Ada Boost, LGBM, and XGB models for news headlines sentiment and numerical analysis

ACADEMIC PROJECTS

Stock Analytics Web Application

- Created a responsive React UI, integrating AJAX calls for real-time stock data from Finnhub deploying Node.js and Express.js
- Implemented features dynamic Highcharts charts and social media sharing, enhancing user interaction and data visualization
- Implemented MongoDB for data management and deployed the application on AWS, specifically using Amazon EC2 instances

SmartPDF Chat: AI-Powered Document Analysis

- Created a Python web application for natural language querying of multiple PDFs leveraging LangChain, PyPDF2, and Streamlit
- Implemented an end-to-end pipeline for text extraction, chunking, and vector representation with sentence-transformers
- Achieved precise response generation through similarity matching with faiss-cpu, flan-t5-xxl model, and InstructorEmbedding

Duo-Othello AI Agent: Intelligent Game-Playing Agent

- Developed a Python AI agent for Duo-Othello, incorporating strategies for 12x12 game board and dynamic time management
- Implemented advanced alpha-beta pruning algorithm for optimal move selection, improving decision-making efficiency
- Demonstrated competitive performance against reference agents, validating effectiveness of developed strategies

Transfer Learning for Image Classification

- Developed a multi-class image classifier using transfer learning with ResNet50, ResNet101, EfficientNetB0, and VGG16 models
- Applied frozen feature extraction and advanced data augmentation (cropping, rotation, flipping) to address limited data
- Achieved 91.8% accuracy with EfficientNetB0, outperforming deeper models using TensorFlow and Keras frameworks

Performance Analysis of Diffusion model for Cloud Removal from Satellite Images

- Built a model to remove clouds from satellite images using Diffusion models and U-Net Architecture and achieved 91% accuracy
- Researched 10 papers related to cloud removal techniques for literature survey and result comparison with other techniques
- Utilized Google Colab, Python, PyTorch, NumPy, and Matplotlib for implementation

COURSES AND CERTIFICATES

- Cloud Engineering and Data Science & Machine Learning Track in the Google Cloud Program
- "Machine Learning A-Z: Hands-On Python & R In Data Science" course on Udemy
- "Python for Everybody" specialization on Coursera