

PARTH DHARMENDRA PRAJAPATI

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EDUCATION

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| University of Southern California | Los Angeles, California |
| Master of Science in Computer Science | August 2023-May 2025 |
| <ul style="list-style-type: none">Relevant Courses: Analysis of Algorithm, Database System, Web Technologies, Foundations of Artificial Intelligence | |
| University of Mumbai | Mumbai, India |
| Bachelor of Engineering in Information Technology | August 2019-May 2023 |
| <ul style="list-style-type: none">Achieved a GPA of 9.19 out of 10Relevant Courses: Machine Learning, Web Development, Operating System, Big Data Analytics, Natural Language Processing | |

TECHNICAL SKILLS

- Programming languages: Python, JavaScript, Java, R, C
- ML Libraries: Scikit-learn, PyTorch, NumPy, Matplotlib, Pandas, Keras, TensorFlow, faiss-cpu, LangChain, InstructorEmbedding
- 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, Research Skills

PROFESSIONAL EXPERIENCE

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| University of Southern California | Los Angeles, California |
| Teaching Assistant | August 2024-Present |
| <ul style="list-style-type: none">Assisting with grading assignments for ITP 259: Basics of Artificial Intelligence and responding to student inquiriesConducting open lab sessions, testing assignments, and fulfilling additional responsibilities as assigned by the professor | |
| Vayu Technology | Los Angeles, California |
| Junior Data Science Intern | July 2024-Present |
| <ul style="list-style-type: none">Gaining hands-on experience in data analysis, signal processing, data visualization, and pattern recognition using PythonWorking on a project applying advanced data handling and analytical techniques to identify significant patterns and insights | |
| The Sparks Foundation | Mumbai, India |
| Data Science and Business Analytics Intern | October 2022-November 2022 |
| <ul style="list-style-type: none">Built a hybrid model for stock price prediction leveraging numerical analysis of historical stock prices and sentimental analysis of news headlines and concluded Random Forest Regressor shows 50% more accurate results than least performing modelApplied Random Forest, Decision Tree, Ada Boost, LGBM, and XGB models for news headlines sentiment and numerical analysis | |

ACADEMIC PROJECTS

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

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

Duo-Othello Game 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

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

EXTRACURRICULAR ACTIVITIES

- Served as President from 2020 to 2023 of an NGO dedicated to aiding underprivileged communities through various initiatives