

Pranav Rajaram

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EDUCATION

University of California, San Diego

La Jolla, CA

Bachelor of Science, Data Science

09/2023 - 06/2027

- GPA: 4.0/4.0
- Instructional Assistant: Supported over 900 students in Principles of Data Science course by developing supplementary materials, leading office hours, and assisting with course topics in Python, pandas, and statistical inference.
- Research Assistant: Analyzed historical commodity pricing data with PCA and cointegration testing, uncovering long-term interdependencies that informed research on African market dynamics and policy implications.

PROFESSIONAL EXPERIENCE

Verisk

Data Science Intern

06/2025 – 08/2025

- Built a multi-agent RAG workflow with LangChain to simulate legal processes for casualty claims, reducing research time by 40% and improving consistency in settlement evaluation. Deployed as chatbot to Hugging Face spaces.
- Developed an NLP evaluation pipeline (keyword overlap, semantic similarity) to evaluate agent responses, improving accuracy of legal document alignment scoring and reducing reliance on manual review.
- Implemented Monte Carlo simulations to model distributions of claim settlement outcomes, enhancing risk evaluation and leading to more precise premium-setting strategies.

ShotQuality

Data Science Intern

07/2024 – 12/2024

- Utilized Python and SQL to perform rigorous quality checks and validation of basketball tracking data, leading to a 20% improvement in data accuracy and reliability for shot probability models.
- Enhanced on-court player detection with bounding box refinement using PyTorch, improving tracking accuracy by 15% and enabling new player movement insights.
- Created and deployed a dynamic R Shiny dashboard, allowing clients to monitor data quality issues in real time.

Agentman

Software Engineering Intern

06/2024 – 09/2024

- Launched Generative AI customer support agents for Shopify and WordPress stores, streamlining order placement, product discovery, and tracking for thousands of end-users, reducing support tickets by 30%.
- Fine-tuned an LLM to dynamically generate React UI components and integrated Anthropic prompt caching, cutting component creation latency by 25%.
- Deployed Flask microservices to Google Cloud, leveraging Docker containerization to reduce deployment setup time and ensure reliable scaling.

PROJECTS

NFL Big Data Bowl

<https://www.kaggle.com/code/pranavrajaram/wrap-up-a-look-at-nfl-tackle-probabilities>

- Utilized XGBoost to model NFL tracking data, assigning tackle probabilities to plays to develop a new "Tackle Rate over Expectation" metric. Commended for quality of visualizations and animations by NFL analytics departments.

Fire-Ready Forests Data Challenge

<https://pranavrajaram.com/fire-ready-forests-site/>

- Built 3-D Canopy Height Models from LiDAR data and trained ML models to predict tree species and forest attributes, improving wildfire risk assessment and guiding resource allocation for forest management.

Power Outage Analysis

<https://pranavrajaram.com/lights-out/>

- Built a Random Forest Regression model with scikit-learn to analyze U.S. power outage data, used techniques like one hot encoding, hyperparameter tuning, and cross-validation to optimize model predictions.

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, SQL, R

Frameworks & Libraries: PyTorch, TensorFlow, LangChain, Flask, React, pandas, scikit-learn, Dask, Spark

Tools & Platforms: Git, Docker, Kubernetes, AWS, PostgreSQL, Tableau, Postman, cURL