Pranav Rajaram

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EDUCATION

University of California, San Diego   La Jolla, CA
Bachelor of Science, Data Science   Expected Graduation: June 2026
- GPA: 4.0/4.0
- Completed courses in data structures and algorithms, discrete math, machine learning, and statistics.
- Supported over 500 students as an Instructional Assistant for Principles of Data Science course by developing supplementary materials, leading office hours, and assisting with course topics in Python, pandas, and statistical inference.
- Founding member of Sports Analytics Club, active member of Data Science Student Society.

PROFESSIONAL EXPERIENCE

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.
- Worked with the Computer Vision team to enhance on-court player detection by utilizing PyTorch and torchvision to generate and refine bounding boxes, improving tracking accuracy and performance.
- Created and deployed a dynamic Tableau dashboard that provides real-time data quality metrics to customers.

Agentman
Software Engineering Intern   06/2024 – 09/2024
- Implemented and published Generative AI customer support agents for Shopify and WordPress stores, enabling users to place orders, explore products, and track orders seamlessly.
- Fine-tuned an LLM to generate dynamic UI components for chatbot responses, and integrated Anthropic prompt caching functionality to optimize component creation speed.
- Deployed Flask functions to Google Cloud and became proficient in calling APIs with cURL and Postman. Developed a robust understanding of full stack web development and mastered containerization with Docker.

4for4
Data Analyst & Columnist   06/2021 – Present
- Authored 100+ data-driven articles read by 5,000+ monthly subscribers.
- Developed NFL Lookahead Lines web application using R Shiny, providing interactive betting line insights to users.
- Established partnership to write 30 articles for Yahoo Sports, expanding audience reach to 100,000 average readers.

PROJECTS

NFL Big Data Bowl 2024
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 team analytics departments.

Power Outage Analysis
https://pranavrajaram.github.io/lights-out/
- Built a Random Forest Regression model with sklearn to analyze a dataset of power outages, used techniques like one hot encoding, hyperparameter tuning, and cross-validation to optimize model predictions.

Open-Source Work
https://nflreadr.nflverse.com/authors.html
- Contributed to documentation and testing of nflreadr package, used by over 100,000 people.

TECHNICAL SKILLS

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

Frameworks & Libraries: PyTorch, LangChain, TensorFlow, Flask, React, pandas, Matplotlib, Sklearn

Other Tools: Git, Tableau, cURL, Postman, PostgreSQL, Kubernetes, Docker, AWS, Heroku