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Rohan Patel

LinkedIn
Github
Portfolio Website

Work Experience

Teaching Assistant, North Carolina State University, Raleigh, NC　　　　**January 2025 – Present**
- Provided direct academic support to 27 students weekly while assisting 120+ students across 6 sections of the course.
- Held weekly office hours to clarify course concepts, troubleshoot assignments, and improve student understanding.
- Developed a grading automation script, increasing grading efficiency by ~47%, streamlining assessments for TAs and reducing turnaround time.

Software Manager, R1649 Private Equity Partners, Dallas, TX　　　　**August 2024 - January 2025**
- Spearheaded AI initiatives to develop models analyzing 1000+ data points, driving data-informed strategic decisions.
- Deployed the company website using AWS Amplify for scalable infrastructure and performance, while configuring backend database functions with AWS EC2 to support efficient data handling and storage for seamless web functionalities.
- Executed secure, scalable authentication protocols using AWS Cognito and NextAuth, streamlining user login workflows.

Software Lead, R1649 Private Equity Partners, Dallas, TX　　　　**May 2024 - August 2024**
- Directed front-end development to better the UI/UX experience on the official R1649 website.
- Organized and assisted a team in integrating the NextJS front end to a Flask backend.
- Designed and launched a client-side dashboard for real-time equity tracking, improving transparency and reducing manual reporting time by 50%.

Education

Computer Science, B.S., North Carolina State University, Raleigh, NC　　　　**August 2023 – May 2026**

Technical Skills

- **Languages**: Java, Python, C, R, JavaScript, TypeScript, SQL
- **Technologies**: React, NodeJS, NextJS, Numpy, Pandas, Flask

Projects

Chess Analysis
- Developed a chess analysis program in JavaScript, leveraging the Chess.com API to retrieve user games and perform automated analysis.
- Implemented a minimax algorithm to evaluate potential moves to a depth of 3 and determine the optimal choice for maximizing positional advantage.
- Integrated a MongoDB database to efficiently store and manage user information for game tracking and analysis.

FINRA Dark Pool Data Analysis
- Engineered a Flask-based backend to ingest and process FINRA dark pool trading data daily—averaging records for over 3,000 securities—to ensure high data accuracy and real-time updates.
- Constructed a dynamic, interactive React dashboard that visualizes daily dark pool trends and trading patterns, enabling users to quickly analyze thousands of data points.
- Leveraged Google Firestore for scalable, cloud-based storage and efficient retrieval of daily FINRA data entries, optimizing performance for seamless data visualization.