TJ Patel

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Education

Carnegie Mellon University Pittsburgh, PA

B.S. Statistics and Machine Learning *Aug. 2022 – May 2026*

Relevant Coursework: Intro to Machine Learning; Foundations of Software Engineering; Natural Language Processing; Data Structures and Algorithms; Database Design and Development; Fundamentals of Programming and Computer Science; Advanced Data Analytics; Designing Human Software; Statistical Computing

Activities and Societies: Sigma Phi Epsilon Fraternity; Asian Students Association; CMU Sweepstakes (Buggy)

Technical Skills

Languages: Python, JavaScript, C/C#, SQL, HTML/CSS, R
Technologies/Tools: Azure DevOps, Azure Data Studio, Grafana, Git, Postman, REST API, FastAPI, Jupyter
Libraries: NumPy, Pandas, Matplotlib, Pydantic, Playwright

Experience

Software Engineer Intern June 2025 – August 2025

Telemetrix *Madison, WI*

- Built Matplotlib visualizations for patient metrics (glucose, blood pressure, weight) to flag abnormalities and critical values, integrating results into comprehensive health reports
- Deployed the reporting system as a FastAPI service, using Pydantic for patient data ingestion and validation, and automated testing/deployment via Azure DevOps pipelines
- Worked directly with healthcare teams to define metric and reporting requirements, ensuring alignment between clinical standards and report output
- Used Grafana to track FastAPI performance post-deployment, as well as other APIs, database connections, and service metrics, ensuring system reliability

Software Engineer April 2025 – Present

Mok Sports Inc. *Remote*

- Developed the backend of a fantasy football app from concept through deployment, and collaborated closely with developers to ensure seamless alignment with project objectives
- Implemented REST API endpoints in a Model-View-Controller layout to fetch live data from a SQL Database hosted on AWS RDS, powering live features in the app
- Created comprehensive database and REST endpoint documentation to support maintainability and future scaling

Research Intern June 2024 – August 2024

Viatris *Pittsburgh, PA*

- Conducted in-depth research on sustainability reports, extracting specific data for a benchmark report utilizing Excel for data organization and R for visualization
- Applied data analysis to compile research findings into strategic insights to support company decision making

Projects

Sonar Cloud Warnings | *JavaScript, Git* Jan 2025 – April 2025

- Refactored JavaScript code in a file of a NodeBB codebase to reduce the codes' cognitive complexity, resolving Sonar Cloud warnings and improving code reliability by 25%
- Increased code coverage by 15% by adding unit tests and integrating them into GitHub Actions CI pipelines

Google Mini Game | *Python, OOP* Jan. 2023 – April 2023

- Constructed and designed a fully operating game utilizing Object-oriented programming (OOP) and basic animations
- Developed hundreds of lines of intricate code to simulate Googles' Earth Day Doodle mini game for entertainment purposes

Additional Activities and Leadership

Interests: Baseball; Playlist Curating; Running; Golden State Warriors; Golf; Basketball
Sigma Phi Epsilon Leadership/Activities: Head Buggy Chair (Sweepstakes); Rush Chair; Social Chair