Ohm Patel

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EDUCATION & SKILLS

Brown University | APIA Nakupuna Foundation Scholarship Recipient

- **Bachelor of Science** in Mechanical Engineering | Cumulative GPA: 3.96 /4.00 — **Sep 2023 - May 2027**
- **Master of Science** in Computer Science / Engineering — **INTENDED: Sep 2027 - May 2028**

Technical Skills

- **Languages:** Python, Java, SQL, MATLAB, TypeScript (ONGOING)
- **Frameworks and Tools**: FastAPI, Pandas, NumPy, Plotly, Pytest; Git/GitHub, Excel, FloJo, FlowKit, LLM APIs

WORK & RESEARCH EXPERIENCE

Data & Software Intern @ Eli Lilly & Company — **May 2026 - Present**
Talent Development Academy — Indianapolis, Indiana

- Developed the Python backend for a proprietary internal application that aggregates and analyzes pharmacokinetic data across multiple drug discovery programs
- Deployed the tool as an interactive web application, improving accessibility and adoption among scientists.
- Built an LLM-powered document extraction pipeline that substantially reduced manual data review time

AMGEN Scholar @ Yale School of Engineering & Yale School of Medicine — **Summer 2024 & 2025**
Engineering Researcher — New Haven, Connecticut

- Utilized a Python/Flowkit pipeline to process high-dimensional .fcs flow cytometry files, quantifying and visualizing 8 macrophage markers across experimental conditions
- Identified polarization trends in visual outputs, prompting subsequent experiments
- Pending publication as a Co-Author in Springer Nature (Under Review as of June 2026)

UTRA Scholar @ Brown University School of Engineering — **Sep. 2024 - Dec. 2024**
Engineering Researcher — Providence, Rhode Island

- Used Python/Pandas to clean and structure ion chromatography data from 1500 samples (150/week across a 10-week study), normalizing PFOA concentrations and organizing metadata for downstream analysis across soil and sand systems

PROJECTS

RAG Evaluation Harness | ChromaDB, RAGAS, DeepEval, Gemini API, SEC EDGAR

- Built a RAG evaluation harness over SEC 10-K filings, benchmarking 6+ pipeline configurations across chunk size, embedding model, and top-k to improve retrieval recall and faithfulness
- Isolated retrieval vs. generation failure modes using RAGAS metrics on a 30-question eval set; integrated a cross-encoder reranker for the largest single-step quality gain

Aero Sim Lab | Python, NumPy, Pandas, Streamlit

- Implemented a 3-DOF rocket trajectory simulator using RK4 numerical integration with variable mass, aerodynamic drag, and thrust vector modeling; validated against analytical edge cases with pytest
- Built a 1D transient heat conduction solver (FTCS explicit finite difference) with configurable flux and adiabatic boundary conditions for thermal wall analysis

LEADERSHIP EXPERIENCE

Brown Healthcare Advancement Journal — **Sep 2023 - Present**
Director & Editor-in-Chief — Providence, Rhode Island

- Led editorial teams, workshops, and draft review processes, leading to 3 publications: https://brownhealthjournal.cargo.site

Men's Volleyball — **Sep 2023 - Present**
Captain — Providence, Rhode Island

- Captained the team to Brown's 1st-ever National Championship; led in-game tactical adjustments and pre-match opponent scouting that directly influenced rotation and serve-receive decisions
- Managed travel logistics, budget planning, roster coordination, and social media; Gained over 500K Views across platforms