

Aaron Gurovich



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Experience

Clinical Data Engineer Intern | Johnson & Johnson MedTech Electrophysiology, Irvine, CA

Jun 2025 – Present

- Strengthened AWS infrastructure by designing scalable SQL data models and building RESTful APIs in Python for applications and data pipelines, with source control and CI/CD workflows managed in Bitbucket.
- Improved AI protocol deviation classification accuracy from 75% to 98% by refactoring backend inference logic, engineering structured prompts, and scaling event-driven cloud processing in Python.
- Reduced data ingestion failures from 15% to 0.01% by refactoring Python backend services to use a modular, object-oriented design with shared validation and error handling, deployed via Terraform.
- Built a full-stack optimization application in R to automate clinical trial site selection, combining algorithmic decision logic with a web-based interface used by internal teams.
- Built AI-powered chatbots and interactive data visualizations in R for production dashboards, improving how users query, explore, and interact with application data.
- Awarded 2nd place at the J&J Data Science Showcase for the Generative AI–driven protocol deviation platform.

Research Assistant | Interactive Data Visualization Lab, Texas Tech University, Lubbock, TX

Oct 2024 – May 2025

- Built a full-stack web application with a Python Flask backend and a JavaScript, HTML, and CSS frontend to ingest, process, and serve large network traffic datasets through REST APIs.
- Designed backend Python processing pipelines and API endpoints to handle data ingestion, transformation, clustering, and time-based aggregation, with source code managed using GitHub.
- Implemented frontend Javascript components for rendering network graphs, timelines, and heatmaps, managing client-side state updates based on backend API responses and user input.

Software Engineer Intern | ProofPerks, Palo Alto, CA

Aug 2024 – Dec 2024

- Cleaned and enriched biometric datasets to improve the accuracy of ML-based identity and age verification systems.
- Improved an ethnicity classification model by refining Python preprocessing and feature logic, increasing prediction quality.
- Queried PostgreSQL data and integrated updates into Ruby on Rails workflows to keep production models reliable.

Education

B.S. in Computer Science, Minor in Mathematics | Texas Tech University, Lubbock, TX

May 2026

- Relevant Coursework: Data Structures, Design & Analysis of Algorithms, Software Engineering, Operating Systems, Database Systems, Computer Architecture, Concepts of Programming Languages, Applied Data Science.
- Awards: Chess Scholarship, Presidential Transfer Scholarship.
- Hillel President: Led the student board and secured a \$5,000 multifaith grant for community events.
- Chess Team: Competed at the national collegiate level; USCF rating 1907.

Projects

UStartKit

- Built a full-stack web application using React and TypeScript with a backend powered by Supabase and Deno to handle user accounts, data storage, and server-side application logic.
- Implemented backend workflows that call OpenAI to generate personalized product recommendations and return structured results to the frontend.
- Integrated the Amazon API into the backend to retrieve real-time product data and serve budget-tiered results through application endpoints.

SiftAI

- Built a full-stack web platform with a FastAPI backend and a JavaScript + Tailwind frontend to manage file uploads, create isolated user workspaces, and orchestrate analysis jobs through REST APIs.
- Integrated a Node.js service with the Gemini API to generate Python analysis code and return structured results for execution by the backend.
- Containerized the multi-service application using Docker and executed generated code inside a secure WebAssembly (Pyodide) sandbox to safely run untrusted workloads.

Skills

- **Languages:** Python, JavaScript, TypeScript, SQL, R
- **Backend:** FastAPI, Flask, Node.js, REST APIs, Distributed Systems
- **Frontend:** React, HTML, CSS, Tailwind, JavaScript DOM
- **Databases & Data:** PostgreSQL, Supabase, AWS Redshift, relational databases, data modeling, pandas
- **Cloud & DevOps:** AWS (Lambda, SQS, API Gateway, S3), Docker, Terraform, Jenkins, Bitbucket, Git, CI/CD, Jira