

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