Aaron Gurovich

aargurov@ttu.edu • +1 949-505-0956 • aarongurovich.com

Education

Texas Tech University *Lubbock, TX*
B.S. in Computer Science, Minor in Mathematics *Expected: May 2026*

- **GPA:** 3.5
- **Relevant Coursework:** Software Engineering, Applied Data Science, Concepts of Programming Languages, Design and Analysis of Algorithms, Data Structures, Object-Oriented Programming, Computer Architecture.
- **Activities:** President of Hillel, Member of Chess Team (USCF: 1907).

Experience

Johnson & Johnson Electrophysiology *Irvine, CA*
Clinical Data Engineer Intern (Extended) *June 2025 – November 2025*

- **Architected** an **R Shiny** site selection tool for clinical trials, using a custom **genetic algorithm** to automate representative site selection and improve both **trial efficiency** and **participant diversity**.
- Boosted a **Generative AI** pipeline's classification accuracy from **75% to 98%** by using **Python** to optimize data ingestion, apply advanced **prompt engineering**, and refine the **AWS** infrastructure.
- **Engineered** an **AI-powered assistant** in **R** that converts **natural language** into optimized **SQL queries**, avoiding costly, inaccurate large-scale AI ingestion and enabling **faster, more reliable insights** in **R Shiny dashboards**.
- **Co-authored** 3 abstracts based on this work, submitted to the **Johnson & Johnson Data Science Showcase**.

Texas Tech University *Lubbock, TX*
Research Assistant *Oct 2024 – May 2025*

- Developed a full-stack network analysis platform using **Flask**, **JavaScript**, **D3.js**, and **Cytoscape.js** for multi-layered, interactive cluster visualizations of complex network traffic data.
- Built a high-performance data pipeline with **Python** to process and enrich raw packet captures by engineering over 20 analytical features on **billions** of data points.
- Applied unsupervised **machine learning** (**Louvain Clustering**) to interactively discover anomalous traffic patterns in network data using **Python**'s **NetworkX** library.

ProofPerks *Remote*
Software Engineer Intern *Aug 2024 – Dec 2024*

- Fine-tuned transformer models from **Hugging Face** for race/ethnicity verification, improving authentication reliability, and deployed them as scalable microservices on **GCP**.
- Architected a cloud-native **data pipeline** on **GCP** to automate the ingestion, preprocessing, and augmentation of large-scale biometric datasets for model training and real-time inference.
- Implemented a multi-layer caching strategy with **Redis**, significantly reducing database load and decreasing API latency for real-time biometric verification services.

Projects

UStartKit

- Developed a full-stack web app using **React** and **TypeScript** to generate curated starter kits for a wide range of hobbies, enhancing user discovery and engagement.
- Integrated a **Deno** serverless backend using **Supabase** with **OpenAI GPT-3.5** and the **Amazon Product Advertising API** to dynamically source and recommend products.

DebateGPT

- Built a data pipeline with **Node.js** to record user debates and process audio transcriptions in real-time using the **AssemblyAI** API.
- Engineered a **JavaScript** frontend that leverages **OpenAI GPT-4o mini** to provide impartial, AI-driven judging and feedback on transcribed debates.

ChessGMTwin

- Implemented a PGN parser and playstyle analyzer using **Next.js** to calculate stylistic metrics from chess games, matching users to Grandmasters based on their playstyle.
- Designed an interactive results page with **React** and **TypeScript**, featuring data visualizations with **Recharts** and dynamic, fluid animations using **Framer Motion**.

Skills

Programming:	Python, R, Java, SQL, Pandas, Numpy, Scikit-learn, PySpark, Scapy, dplyr, ggplot2, tidyr
Cloud & Data:	AWS (S3, Lambda, SQS, Redshift, Glue), GCP, Azure, Docker, PostgreSQL, Cloudflare, Supabase
Frameworks:	Flask, React, Shiny, D3.js, REST APIs, Cytoscape.js, Node.js, Next.js
Dev Tools:	Git, Linux, Bash, CI/CD, GenAI, RStudio, VS Code, Tableau