

# Tom A Steinman

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## EDUCATION

University of Missouri-Kansas City (UMKC)

Kansas City, MO

**M.S. in Computer Science**, Emphasis in Artificial Intelligence - 4.0 GPA

12/2025

**B.A. in Computer Science**, Summa Cum Laude

12/2024

## SKILLS

- **Languages & Frameworks:** Python, C++, Java, C#/.NET, SQL, Flask (REST), PyTorch, TensorFlow, Qiskit
- **Data & ML:** Classical ML (LR, RF); deep learning (FNN, CNN detection, GNN/TGN); recommenders (NCF/two-tower); embeddings & retrieval (FAISS); training/tuning (regularization, class imbalance, CV); preprocessing (PCA, scaling); evaluation (ROC-AUC, F1, confusion matrix).
- **Cloud & Infrastructure:** GCP (Cloud Run, GKE, Functions, API Gateway, Artifact Registry); Docker; Terraform (VPC/IAM/Firewall)
- **Web Development:** HTML/CSS, JavaScript (Node.js), API design & integration
- **Security & Networking:** Nginx, TLS/OpenSSL, Wireshark, Nmap, Scapy; subnetting/VLANs (Packet Tracer)
- **Collaboration Tools:** Git/GitHub, Agile/Scrum, documentation, issue/PR workflows

## WORK EXPERIENCE

**Broadleaf Inc / ASRC Federal**  
**Lead Technician**

Manassas, VA

02/2018 – Current

- Led installation, de-installation, repair, and troubleshooting of computers, servers, switches, and network patching across 1000+ locations.
- Partnered with network engineers to stage, wipe, and reconfigure servers/switches; validated hardware readiness and supported deployment rollouts.
- Built and used scripts to accelerate device wipe/re-image and configuration workflows; improved repeatability and reduced manual steps.
- Tracked work via QuickBase tickets (intake, documentation, status, closure) and communicated outcomes to stakeholders.
- Maintained security and confidentiality in accordance with an active U.S. Public Trust clearance.

**NSF REU AI-Cybersecurity Research**  
**Intern**

Kansas City, MO

06/2024 – 08/2024

- Research the current trends in AI and Cybersecurity
  - Implemented AI/cybersecurity experiments in Python; cleaned and transformed datasets for training and evaluation.
  - Reported results in bi-weekly meetings; collaborated using Git-based workflows and technical documentation.
- Delivered an in-person research poster and contributed to an IEEE-style paper draft.

## HIGHLIGHT PROJECTS

**LLM Assistant for Email & Calendar Management**

(Python, Flask, Docker, GCP (Cloud Run), REST API, Terraform, CI/CD)

- Built a Flask API integrating Gmail and Google Calendar with RESTful routes and JSON serialization.
- Containerized with Docker and deployed to Google Cloud Run; provisioned infrastructure with Terraform; automated builds/tests via CI/CD.
- Worked asynchronously through GitHub issues/PRs and documentation. (GitHub: <https://github.com/tasn78/llm-assistant>)

### **Improving Minority Class Classification in Large Imbalanced Datasets (CSE-CIC-IDS2018)**

(Python, pandas, scikit-learn, PyTorch, NetworkX, Qiskit, QAOA, Qiskit Aer, IBM Quantum hardware)

- Constructed a knowledge graph linking flows, services, and temporal windows to enrich low-frequency intrusion classes.
- Engineered embedding features capturing rarity and relational patterns to strengthen minority-class signals.
- Formulated feature selection as a QUBO and solved with QAOA in Qiskit to select compact, discriminative subsets.
- Executed circuits on IBM Quantum computers and compared to noise simulation (Qiskit Aer) and classical baselines; analyzed depth/entanglement/runtime tradeoffs.

### **Gene Sequence Vectorization & Analysis (OpenGenome2)**

(Python, Spark, Hadoop, HDFS, MapReduce, Docker)

- Developed a distributed Spark/Hadoop pipeline to tokenize DNA into k-mers/codons, aggregate counts, and compute usage distributions.
- Engineered scalable ingestion and search logic using HDFS-backed data flows; demonstrated transformation and analysis at scale.
- Containerized components to support reproducible runs across environments. (GitHub: <https://github.com/wortcook/UMKC/tree/main/Fall2025/CS5570>)

### **ACTIVITIES & INVOLVEMENT:**

UMKC Quantum Society for AI and Computation Vice President - 10/2024 – 12/2025

- Led workshops on quantum computing fundamentals, quantum error mitigation, and hybrid quantum-classical ML.

UMKC Cybersecurity Club participant - 2025

### **HONORS & AWARDS:**

2025 Discipline Distinction Award - UMKC

1st Place — Quantum AI Track, UMKC Hack-A-Thon (2025)

IBM Qiskit Fall Fest Mentor Badge (2025)

Dean's List (2022–2024)