

Zain Syed

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EDUCATION

University of Houston

Bachelor of Science in Computer Science

Houston, TX

Expected May 2028

- **GPA:** 3.50
- **Honors:** Dean's List (Fall 2024)

PROFESSIONAL EXPERIENCE

IoT Cyber Defense Extern

March 2026 – May 2026

Extern

Remote

- Enhanced the security posture of smart water IoT infrastructure, successfully mitigating threat vectors for a simulated enterprise environment (The Grand Marina Hotel), by conducting comprehensive threat analysis and developing targeted defense mechanisms.
- Achieved a 100% attack rejection rate with a minimal +0.4 ms latency overhead by engineering a four-layer cryptographic defense architecture (mTLS, Timestamp Freshness, Sequence Counters, Message Signing) to secure a live MQTT pipeline.
- Detected sophisticated sensor anomalies like pressure drifts and flow surges, achieving a 0.757 F1 score, 0.736 Precision, and 0.780 Recall, by deploying an Isolation Forest machine learning model.
- Streamlined incident monitoring to provide instantaneous automated defense tracking by developing a real-time visualization dashboard that translated cryptographic rejections into actionable alerts.

PROJECT EXPERIENCE

Multi-Agent Equity Research Terminal | *LangGraph, FastAPI, ChromaDB, PostgreSQL*

September 2026

- Architected a multi-agent orchestration pipeline using LangGraph to concurrently execute dedicated LLM agents for quantitative financial analysis and semantic news retrieval, synthesizing findings through an arbiter agent.
- Prevented hallucinated investment recommendations by engineering a deterministic guardrail node that programmatically validates explicit rating schemas and citations of core valuation metrics.
- Eliminated redundant LLM calls and minimized latency by deploying a 24-hour TTL Neon PostgreSQL cache layer and persistent ChromaDB vector store, containerized via Docker on Render and Vercel.

AI-Powered Applicant Tracking System (ATS) | *Python, Gemini API, Streamlit, FastAPI*

May 2026

- Automated candidate profile analysis to generate targeted feedback by integrating the Gemini API into a custom Python-based screening tool.
- Achieved accurate context retrieval against target job descriptions by implementing CRUD operations and a Retrieval-Augmented Generation (RAG) architecture using ChromaDB.
- Deployed the decoupled application for reliable public access by hosting the FastAPI backend on Render and deploying the interactive frontend on Streamlit Community Cloud.

ClearRisk | Full-Stack Cyber Safety Platform | *FastAPI, React, Node.js, Vite, Gemini API*

April 2026

- Designed and developed ClearRisk, a full-stack security posture review platform to assess small-business cybersecurity vulnerabilities and validate email domain records in a 48-hour sprint.
- Built the backend API using FastAPI and integrated Google Gemini with DNS validation tools to evaluate a 20-point risk questionnaire, rank threats by severity, and export audit reports.
- Won 2nd Place among 20+ competing teams in the Technical Category at HackMISSO 2026 by delivering an end-to-end working demo alongside a three-person team.

TECHNICAL SKILLS

Languages: Python, SQL (PostgreSQL), TypeScript, Bash, HTML/CSS

Developer Tools & Infrastructure: Docker, Docker Compose, Git, Linux, GitHub Actions (CI/CD), AWS, Azure, Terraform, Render, Vercel

Frameworks & Libraries: LangGraph, FastAPI, Next.js, Streamlit, React, ChromaDB, Gemini API, SQLAlchemy, Pytest

Security Concepts: Threat Modeling, Cryptography (mTLS), Network Traffic Analysis

Certifications: Google Cybersecurity Certificate (Coursera)