

Salman Azeez Syed

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EDUCATION

Georgia Institute of Technology - Master of Science in Computer Science (3.8 GPA)

Expected Graduation: May 2025

Netaji Subhas University of Technology - Bachelor of Technology in Information Technology

Aug 2019 - May 2023

Coursework: Advanced Operating Systems, Computer Networking (TCP/IP, BGP Hijacking, CDNs, SDN, P4), Distributed Systems, Computer Architecture, Machine Learning, Artificial Intelligence, Cloud Computing, Algorithms/Data Structures, Database Management

SKILLS

C/C++, Python, JavaScript, TypeScript, SQL, HTML, CSS, Tailwind, Solidity, React, Node.js, Express.js, Next.js, Three.js
AWS, Azure, Langchain, Redis, PostgreSQL, MongoDB, Pinecone, Neo4j, FAISS, Docker, Kubernetes, Git, Linux, Shell, Jira, Jenkins, Unity

EXPERIENCE

Software Engineering Intern, Vieaura LLC - Alpharetta, GA

May 2024 - Aug 2024

- Lead Developer for a **Gen-AI** based Mixed Reality (**AR/VR**) **Unity app** to automate virtual manufacturing worker training.
- Architected an **end-to-end pipeline** that converts input user manuals into their virtual interactive counterparts in **one click**. Factory floors are **3D localized** and mapped to **auto-generated contexts that switch** based on your location in **real-time** providing you with **scene-specific GenAI chat features** and virtual interaction with machinery
- Developed web interface, document processing pipeline, **RAG API** and **Unity app** to map contexts to **anchored 3D scenes** in **real-time**.
- Used **Neo4j** Knowledge Graphs, **FAISS** vector indexing, **FastEmbed Embeddings** and **Gemini 1.5 Pro LLM** for **RAG** with zero cost.
- Optimized manufacturing workflows reducing training time by 37%, training costs by 40% and boosting worker efficiency by 25% (est).

Software Engineering Researcher, Cypherock - Singapore

Oct 2022 - Apr 2023

- Collaborated directly with the CEO to drive **startup growth** initiatives, leading to successful **\$1 million in seed funding**.
- Conducted comprehensive **security analysis** of crypto hardware wallets, developing strategic vulnerability mitigation solutions
- Developed **high-impact** tech content management SEO strategy, boosting **page visits by 460%** and **user engagement by 2000%**

MITACS Visiting Research Scholar, University of Victoria - British Columbia, Canada

May 2022 - Aug 2022

- Sponsored as a **top researcher** at the **World's Premier Research Internship** program funded by NSERC with **acceptance rate of 4%**.
- Proposed a novel Proof-of-Authority based consensus algorithm for scaling hierarchical networks on distributed systems using SDN.
- Delivered **technical presentations** at leading research labs and conducted **global outreach to 50+** industry researchers and CEOs.

SOFTWARE PROJECTS

DAGORA (MVP 0.1) - A fully-decentralized anti-censorship Web3-based Social Media platform featuring NFT-gated discussions forums and microblogging features. Built on Arbitrum Nova capable of **auto-scaling, low-latency updates** and **end-to-end encryption**.

TURMERIK - A HIPAA-compliant **OCR-based** prescription digitization framework using **OpenAI, Mistral** and **Azure** for **80% accuracy** with low variance on **multi-modal unstructured handwriting data** compared to **64% to 85% variance** on industry standard. Built a **benchmarking pipeline** with an **in-house dataset** and automated scheduled runs using **Azure Functions**.

MAPREDUCE - A simplified end-to-end MapReduce Infrastructure using **gRPC** with shared file system and sharding-based file splits in C++.

PATHFINDER - A C++ based context-sensitive reachability analysis tool on ICFGs using **Static Value Flow (SVF)** on **LLVM IR**.

vCPU SCHEDULER - Scheduler for dynamic resource balancing across VMs on physical cores through KVM/QEMU hypervisor using libvirt.

AMAZON STORE - Store service capable of processing concurrent client product queries using **async gRPC** and **threadpool** in C++.

GTSEARCH - AI-powered domain-specific search engine for Georgia Tech using custom **crawler, Pinecone semantic search** and **OpenAI**.

RESEARCH PUBLICATIONS (3 of 7)

RARE: Resource Allocation using GBDT-distilled Deep Reinforcement Learning for 5G Network Slicing (2024 - [link](#))

- State-of-the-art Resource Policy Optimization framework using ADMM and TD3 algorithm without closed-form utility functions.
- Achieved learning rate, utility convergence and **~64x speedup** in inference time (Distillation) faster than SOTA DRL approaches.

Modelling Distributed and Configurable Hierarchical Blockchain for Large-Scale Internet of Things (2023 - [link](#))

- A novel scalable hierarchical blockchain L1 framework with worst-case TPS improvement of 34% vs industry standard.
- Custom built blockchain from scratch using JavaScript and REST APIs stress-tested using Postman against SOTA.

Applying Ambient Intelligence Techniques for Cognitive and Emotional Awareness in Internet of Things (2023 - [link](#))