

Chaitanya Sharma

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🎓 Education

University of Waterloo [🔗](#)

Sep 2021 – 2026

BASc. in Computer Engineering, AI Option & Quantum Specialization

Relevant Courses: Computer Architecture, Compilers, Computer Networks, Real-Time Operating Systems, Systems Programming & Concurrency, and Data Structures & Algorithms

🔧 Skills

Languages

Python, C++, C, Typescript, Java, Rust, Go, SQL, Shell

Frameworks

gRPC, REST, Qt, React, Node, Spark, GraphQL

Tools

AWS, Azure, Docker, Kubernetes, Git

📁 Professional Experience

Comtech (Accenture) [🔗](#)

Jan 2024 – Apr 2024 | Toronto

Data Engineering Intern

- Architected and implemented a scalable data ingestion pipeline using **Azure Synapse Analytics** and **Data Lake Storage**, processing over **70 million** datapoints across multiple subject areas, resulting in a **40%** reduction in data processing time.
- Leveraged Azure **Databricks** to develop and deploy advanced data transformation jobs, implementing snowflake schema models that improved data normalization efficiency by **35%** and enabled real-time analytics capabilities.
- Engineered a real-time solution using Azure **Stream Analytics** and **Cosmos DB**, integrating with **Power BI** to create dashboards that provided actionable KPI insights, speeding-up stakeholder decision-making by **50%**.
- Achieved the **Outstanding** Co-op Rating, recognized as the best intern for contributions during the internship.

Rocket Science VFX [🔗](#)

Sep 2022 – Aug 2023 | Toronto

Pipeline Developer Intern

- Developed a high-performance, GPU-accelerated rendering pipeline using Maxon Redshift and Arnold Renderer, resulting in a **40%** reduction in render times for complex scenes and enabling real-time previews for artists.
- Engineered a hybrid cloud+on-site render farm orchestration solution using **AWS EC2** and **Kubernetes**, integrating with SideFX Houdini and Autodesk Maya, Foundry Nuke, which increased render farm utilization by **30%** and scaled render farm capacity by **200%** during peak production periods.
- Created a full-stack web application using **React**, **Node.js**, and GraphQL to visualize render farm statistics and job queues. Integrated with AWS services (**EC2**, **S3**, **Lambda**) for scalable backend processing, resulting in a **50%** improvement in resource allocation efficiency.
- Received Outstanding Rating for both Co-op terms.

Softchoice [🔗](#)

Jan 2022 – Apr 2022 | Toronto

Workplace Solutions Intern

- Automated SOW approvals using Microsoft **Power Platform** and **Azure Logic Apps** and **Azure Functions**, cutting approval time by **70%** for **180+** employees, saving **\$1,200** per manager annually.
- Received an Outstanding Co-op rating.

🚀 Projects

RDFS — Rust, gRPC, AWS [🔗](#)

Distributed File System For Google's MapReduce framework

- Designed a fault-tolerant, horizontally scalable master-slave architecture, leveraging **gRPC** for seamless communication across nodes on AWS **EC2**, with real-time monitoring via **CloudWatch**.
- Containerized the system using **Docker** and orchestrated deployment with **Kubernetes** and AWS **Elastic Kubernetes Service (EKS)**, enabling smooth scaling for production environments.
- Optimized read/write operations and benchmarked against Apache **Hadoop's** HDFS, achieving a **30%** faster performance for large-scale data processing tasks.

Go DB Lite — Go, SQL, Data Structures, Unix Shell [🔗](#)

ACID-compliant DBMS in Go with its own parser, lexer, and database file format.

- Developed a custom **SQL**-compliant query parser and lexer, and file storage using a B+-Tree indexing system for optimal performance.
- Built an extensible architecture supporting key SQL operations (create, insert, delete, update, alter), with optimizations inspired by **MySQL** and **PostgreSQL**, achieving **20%** faster query execution.
- Deployed a scalable testing suite in **Kubernetes** for multi-node testing and **continuous integration (CI)**, achieving smooth automated testing across large datasets.