Tejas Wilkhoo

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Education

University of Waterloo *Waterloo, ON*

Bachelor of Computer Science, Artificial Intelligence Specialization, Management Minor *Sept 2021 - April 2026*

- **Courses:** Networks, Distributed Systems, Operating Systems, Artificial Intelligence, Algorithms, Data Structures. **GPA: 3.90.**

Work Experience

Databricks *Bellevue, WA*

Software Engineering Intern *May 2025 - Aug 2025*

- Joining the Distributed Data Systems (DDS) team.

Bloomberg *New York, NY*

Software Engineering Intern *Sep 2024 - Dec 2024*

- Led the end-to-end design and implementation of ETL pipelines facilitating **tens of thousands** of **fixed income** post-trade records daily for a new **Apache Cassandra** database cluster featuring a refined node partitioning strategy.
- Collaborated with internal clients on the development of a **Apache Kafka** ingestion service in **C++** to backfill **hundreds of thousands** of trade records weekly into new mutable tables, leading to new **real-time data snapshot** capabilities and a **4% decrease** in p99 read latency.
- Significantly optimized **multithreaded database queries** for post-trade data required by AI pricing model teams, utilizing **Apache Spark** with **Python** (PySpark), and **DataStax's C++ Cassandra** driver, leading to a decrease from **5 hours** to **8 seconds** (99.94% faster) for data acquisition.

Google *New York, NY*

Software Engineering Intern (SWE) *May 2024 - Aug 2024*

- Established new platforms and automated alerts for Google's Time services to detect and indict defective atomic/GPS clocks globally, improving consistency with UTC(NIST) required for **ultra low-latency systems** and **databases** by several percent during machine failures.
- Eliminated the **hours** taken to disable a machine manually by automating the process of tracking time disagreements and GPIO errors using **Python** and **SQL** queries with Google's monitoring database.
- Devised graph-based time disagreement visualizations for all data centers around the world using **Golang, gRPC and Protobuf**, improving error representation and cause identification for SREs.

Google *Sunnyvale, CA*

Software Engineering Intern (STEP) *May 2023 - Aug 2023*

- Launched an automated service to programmatically identify malicious URLs hosted on Google Compute Engine virtual machines, yielding a **10x increase** in hostile Compute Engine users addressed and disabled.
- Deployed **C++** services and **Golang** scripts for DNS/IP lookups using **gRPC and Protobuf**, and reprovisioned the existing lookup pipeline for the WHOIS service to incur a **99.8% load decrease** by redirecting traffic to a feature cache.

Google *Waterloo, ON*

Software Engineering Intern (STEP) *May 2022 - Aug 2022*

- Crafted ingestion pipelines for an ML-based bug triaging tool that reduces SWE hours spent debugging integration and end-to-end tests by dynamically routing bugs and de-duplicating test failures, improving clustering accuracy by **21%** with a new feature generator.
- Developed a **custom Go server** using **Pub/Sub queues, gRPC, and Protobuf** for inter-process communication, minimizing latency to **3700ms** (75% decrease from previous) per workflow execution.

Projects

- **UW Blueprint** , *Technical Lead*. Directed a team to complete a management service using **MERN Stack, Docker, Stripe, REST API, Figma** for Focus on Nature, managing production deployment on **Firebase, AWS EC2, S3** for a user base of **20,000+ students** in Ontario.
- **UW Aerial Robotics** , *Systems Developer*. Developed an **Attitude and Heading Reference System** in **C** for STM32-powered autonomous aircrafts, researching different filters (Kalman, Madgwick) to increase attitude accuracy.
- **Engrain** : A **React/Next.Js** website to add, find, save and share memorable locations and images, with a backend built with **GraphQL, Apollo, Prisma ORM, CockroachDB, AWS S3, Auth0, Docker,** and deployed on **AWS EC2**.
- **PaperTrade** : A paper trading desktop app to trade Stocks, ETFs, and Crypto built in **Python**, fetching data from the **MBoum API** and persisting user selections in **MongoDB**, with an interactive UI built with **TKinter** and **MatPlotLib**.

Skills

Languages C++, Go, Python, C, Java, TypeScript, Javascript, SQL, Dart, GraphQL, HTML/CSS

Technologies Firebase, PostgreSQL, MongoDB, MySQL, AWS (EC2, S3, DynamoDB), Google Cloud (Storage, Compute, Kubernetes), gRPC, Protobuf, Apache Cassandra, Spark, Spring Boot, Flask, Django, React, Node.js, Express.js, Git, Linux/Unix, Docker