

# Sambhav Khanna

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## EDUCATION

### University of Waterloo

Sep 2022 – Apr 2027

*Bachelors of Computer Science (Cumulative Average of 90%)*

*Waterloo, Ontario*

- **Coursework:** Data Structures, Algorithms, Operating Systems, Networks, Object-Oriented Programming

## TECHNICAL SKILLS

**Languages:** Python, TypeScript, JavaScript, Golang, C/C++, C#, HTML/CSS

**Frameworks:** Express.js, Next.js, Node.js, React.js, Flask, Django, Langchain, Tailwind CSS

**Developer Tools:** MongoDB, Firebase, Supabase, Postgres, MySQL, AWS, GCP, Vercel, Docker, Azure

## EXPERIENCE

### Software Engineer Intern

Jan 2025 – Apr 2025

*Geotab | C#, ASP.NET, Kubernetes, Grafana, BigQuery*

*Waterloo, Ontario*

- Reduced CPU usage by **30%** in dev environment by scaling down unused service replicas through **Terraform**.
- Increased test coverage by **7%** by fixing broken functional tests, leading to detection and resolution of a data race.
- Enhanced debugging for **50+** engineers by integrating Sentry for error reporting, redacted user PII from Sentry.
- Migrated and tested services from .NET 8.0 to .NET 9.0 and improved system reliability and uptime by adding SQL and Redis health checks to detect and respond to service failures proactively.
- Led a team of 3 interns to design and implement a data ingestion pipeline for a new service, coordinated end-to-end testing, and presented deliverables to stakeholders.

### Software Engineer Intern

Jun 2024 – Sep 2024

*Tallgeese AI | Python, Django, ChromaDB, Langsmith*

*San Jose, California*

- Improved AI agent response accuracy by **96%** by fixing document ingestion and chunking issues, leading to a surge in user adoption and onboarding of **20+** new enterprise clients, including **Arm** and **Intel**.
- Eliminated **5+ minutes** of checks per deployment by integrating accuracy evaluation into the **CI/CD** pipeline.
- Reduced queries sent to LLM by **30%** by developing a **Redis** based semantic cache for storing agent responses.
- Built and tested **4** REST API endpoints using **Django**, collaborated with frontend team to deliver the features.

### Software Engineer Intern

Apr 2024 – Jun 2024

*Qatar Airways | Python, Flask, Langchain, OpenAI API*

*Doha, Qatar*

- Developed a retrieval system for storing **100+** documents, each with **200+** pages containing airplane data.
- Reduced the time to first token by **80%** by indexing and storing the embeddings on the cloud vector database.
- Increased the accuracy of responses by **70%** by implementing a data cleaning pipeline to clean tabular data.

### Full Stack Engineer Intern

Sep 2023 – Dec 2023

*Toronto Transit Commission | Python, TypeScript, React.js, Electron.js*

*Toronto, Ontario*

- Stored and managed **1000+** logins for **40+** databases by developing an encrypted password management app.
- Decreased the application render time by **80%** by migrating the codebase from Python **Tkinter** to **React.js**.
- Reduced the build time from **2 minutes** to **12 seconds** by containerizing the app and using Docker layer cache.

## PROJECTS

### Negotiate Transaction | Golang

- Developed a client-server protocol to negotiate a connection using **UDP** and create a transaction using **TCP**.
- Implemented graceful shutdown of server and handling of multiple concurrent clients with Go routines.

### Predictify Pro | Python, Stripe API, Next.js, Django, GCP

- Built the website and backend for Predictify Pro, a startup, integrating a RAG chatbot and **Stripe API**.

### ChatrBox | MongoDB, React.js, Express.js, Node.js, Socket.io

- Built a **real-time chat** app using websocket, implementing React context to optimize **state management**.
- Containerized the app with **Docker** and deployed it on an **AWS EC2** instance behind an Nginx reverse proxy.