

Satad Sharar

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EDUCATION

Carleton University

Sept. 2023 – May 2028

Bachelor of Computer Science Honours (Co-op)

Ottawa, ON

- GPA: 3.7/4.0

TECHNICAL SKILLS

Languages: Java, Python, C, C++, SQL, Golang, HTML/CSS

Frameworks & Libraries: React, Flutter, Flask, Bootstrap, Boto3, SQLAlchemy, Paho-mqtt, Psycopg2, HTTP, gRPC

Machine Learning & Data: TensorFlow, scikit-learn, Pandas, NumPy, Matplotlib, LangChain, Ollama

Developer Tools & Platforms: Git, GitHub, GitLab, Bitbucket, OpenStack, Jira, Confluence

Databases & Cloud: DynamoDB, S3, ChromaDB, ECS, EKS, Azure DevOps

EXPERIENCE

Site Reliability Engineer Intern

Sept. 2025 – Apr. 2026

Signiant

Ottawa, Canada

- Developed **interactive npm CLI tool** that automates creation and deployment of **AWS Lambdas** by generating **CI/CD** pipeline configurations and **CloudFormation** files using **Jinja** reducing setup time by **80%**
- Implemented **AWS quota monitoring** for **10+ development teams** using **AWS Trusted Advisor**, **Datadog**, and **CloudWatch** dashboards and alarms, giving preemptive alerts when usage nears account threshold
- Deployed a Slack utility using **AWS Lambda** and **Terraform** to automate standup reminder setup, configurations and summary reports, replacing a third-party SaaS product resulting in **\$2000 annual savings**
- Created **bash** provisioning script for VMs to enable login using **Microsoft Entra ID** authentication and **Azure RBAC**, eliminating the need for SSH keys and securing the process of accessing VMs in production environment

Software Engineer Intern

May 2023 – Dec. 2023

Hills Health Solutions Ltd.

Melbourne, Australia

- Integrated a **Flask** web portal with **Linux PostgreSQL backend** to show all active nurse call alerts, allowing clinical staff to monitor call duration, severity, and location, reducing average response time by **15%**
- Engineered **Python IoT** script via **MQTT** to process JSON payloads for nurse call points. Sent response to call points with priority-based LED alerts and maintained **immutable audit trail** in **PostgreSQL** database
- Improved indoor tracking accuracy by **60%** by developing a **Real-Time Locating System** integrating u-blox **ANT-B11** anchors and **BG22** tags and **ESP32** relays to capture and triangulate **Angle of Arrival signals**

PROJECTS

SkyWatch

Jan. 2026

- Skywatch is a Go-based SRE platform that ingests live OpenSky flight data to detect trajectory anomalies at scale
- Exposed a **REST API** for anomaly queries and used **gRPC** for low-latency, strongly-typed communication between internal **Golang microservices**, reducing inter-service overhead on high-frequency flight-vector streams
- Containerized with multi-stage **Docker** builds and deployed them on **Kubernetes** using health probes, enabling self-healing that automatically restarts and reroutes around failing pods to maintain strict **SLOs**
- Used **Redis** and **Kafka** to share data between services, allowing the **API** to give instant results without waiting for slow external updates and implemented message reconciliation in case of outages
- Configured **Prometheus** and **Grafana** to visualize real-time aviation telemetry, alerting and observability

Vector Vault

Aug. 2025

- Built an **AI RAG** assistant that identifies document sections based on the intent of a question rather than just matching words, making it easier for users to find precise information within long technical files
- Created a pipeline to parse PDF content and generate high-dimensional **embeddings** via **Llama 3**, indexing the results in **ChromaDB** for persistent vector storage and retrieval
- Executed a chunking strategy using **Recursive Character Text Splitter** with a strategic sliding window overlap, maintaining semantic continuity across document segments and reducing model hallucinations by **20%**
- Visualized team feature data and logistic model using **matplotlib** graphs, analyzed model performance using **confusion matrices and precision/recall**.