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EDUCATION

University of Alberta

09/2023 - Present | Edmonton, AB

Bachelor of Science in Computing Science (Major in A.I)

- Relevant Coursework: Algorithms, Computer Architecture, Reinforcement Learning, Machine Learning, Software Engineering, File & DBMS, Web Apps & Architecture, Search & Planning in AI
- Expected Graduation: 2027

PROJECTS

Autonomous Overload Remediation System (AORS)

01/2026 - Present

Python | FastAPI | scikit-learn | psutil | Streamlit

- Built an **MVP in 24 hours (team of 3, hackathon)** and evolved it into an autonomous overload remediation system for real-time CPU saturation recovery.
- Achieved autonomous **recovery from 90%+ CPU saturation in under 30s** on real hardware by closing the loop from psutil telemetry to 20s sliding-window detection (confidence ≥ 0.50) to a throttle actuator, followed by a 15s verification window.
- **Removed hardcoded overload thresholds** by implementing online adaptive control (EWMA + Welford) **over a 200-observation buffer**, activating the learned work-rate to CPU model only after **10+ samples** to improve stability and reduce premature actions.
- Improved **reliability and observability** with a decoupled FastAPI control plane (**12 REST endpoints**) and **Streamlit dashboard (1–2s refresh)**, enforcing bounded thrashing via a 30s action cooldown and a cap of 3 actions per 5 minutes.

Data-Driven Event Allocation Platform (AuroraChance)

10/2025 – 12/2025

Java | Firebase | Android | Google Maps SDK

- Delivered a real-time event lottery platform across **17 Android screens** with **3-role sync** (entrants, organizers, admins) using Firebase Firestore, structured collections for events, users, waitlists, and notifications, and concurrent update handling.
- Implemented location-based check-in validation and address autocomplete for event creation using **Google Maps SDK, Places API**, FusedLocationProviderClient, and Geocoder for geolocation capture and validation.
- **Delivered 45+ user stories in 9 weeks with a 6-member team** using GitHub workflows and Agile Kanban; improved reliability through **60+ unit tests and 13+ Espresso UI tests** using JUnit, Mockito, and UML/CRC design.

Distributed Social Network (Fuchsia)

01/2026 - Present

Django | REST | PostgreSQL | HTML/CSS/JS | Heroku

- **Delivered a federated social network** in a **6-person team**, implementing a **67 user-story spec** using **Django, PostgreSQL, Heroku** with a complete browser UI.
- **Achieved federation across 6 deployed nodes** by building an **inbox-first push** pipeline for posts, likes, comments, and follows using **HTTP Basic Auth + FQIDs**.
- Implemented **25 REST routes (40+ operations)** with pagination and visibility rules (PUBLIC, UNLISTED, FRIENDS, DELETED), and validated core flows via automated API tests + OpenAPI/Swagger docs.

LEADERSHIP AND AWARDS

Awards & Recognition

04/2023

- **3rd Place**, World Robotics Olympiad Nationals UAE
- University of Alberta Regional Excellence Scholarship – **\$5,000**
- University of Alberta International Admission Scholarship - **\$5000**

Good Will Ambassador's Club, President

05/2022

- Organized and ran multiple charity drives and fundraising events as club President.
- Kept initiatives on track through weekly meetings, timeline alignment, and supporting long-term club growth.

SKILLS

Programming languages:

Python, Java, JavaScript, C, Bash, SQL, RISC-V Assembly

Web & App Dev:

HTML, CSS, RESTful APIs, FastAPI, Streamlit, Android, ReactJS

Tools and Frameworks:

Linux, Git/GitHub, GitHub Actions (CI/CD), VS Code, Android Studio, Firebase, MongoDB, Django, Heroku, npm, Node.js

Software Development:

OOP, DSA, Agile/Kanban, OOAD (UML/CRC, design patterns), Testing (JUnit, Mocha, Mockito, Espresso)

Cloud & DevOps:

CI/CD, Docker, AWS SAA (in progress)

Data Science & ML:

NumPy, PyTorch, Pandas, Matplotlib, scikit-learn, time-series analysis, data QC/outlier handling