

Mithun Dhanasuthan

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EDUCATION

Carleton University

Ottawa, ON

Bachelor of Engineering in Computer Systems Engineering

Expected Graduation: Apr. 2030

- **Relevant Coursework:** Programming & Data Management, Circuits & Mechatronics, Linear Algebra, Calculus for Engineering

EXPERIENCE

Software Engineering Intern

Jun. 2026 – Aug. 2026

CodeWilling

Remote

- Investigated and classified data pipeline failures for financial data syncing from on-premises servers to AWS, reviewing 1,000+ files per cycle by auditing Parquet outputs, cloud sync status, Delta transaction logs, and AWS Athena / Databricks row counts
- Resolved server node-limit errors by tracing stale ServerRequest records in MongoDB and updating machine-spawn failure handling so unsuccessful requests transition to terminated
- Implemented configuration support that lets administrators auto-start web UIs on newly spawned virtual machines via init.json settings
- Built unattended execution and reporting for 50+ Python Selenium UI tests across six product areas, integrating Claude to analyze failure logs and auto-generate email reports

Software Engineer Intern – Mobile

Jul. 2025 – Aug. 2025

Brash Inc. – Velavu

Ottawa, ON

- Optimized Gateway mobile dashboard load time by refactoring layout styling from positional to transform properties, reducing layout reflows on render
- Integrated JSON-based device telemetry over REST APIs into mobile dashboard views to display hardware status, battery levels, and firmware versions, and trigger audio alerts
- Built mobile dashboards for monitoring networks, floor maps, and site connectivity by translating Figma designs into production React Native interfaces

PROJECTS

Raven Scheduling | *Python, FastAPI, React, Docker*



- Developed a deadline tracking extension using FastAPI and React that scrapes REST endpoints and normalizes course schedules for Brightspace users
- Implemented an automated change detection feature in Python that compares currently scraped data against Brightspace to trigger client updates
- Containerized the application using a multi stage Docker build to eliminate Node.js runtime dependencies

Basketball Position Analytics | *Python, Flask, SQLAlchemy, SQLite, pandas, NumPy, Chart.js, Render*



- Built a basketball analytics web app with a Flask/SQLAlchemy backend, processing NBA player stats with pandas and NumPy to calculate position averages, per-36 stats, and true-shooting percentage
- Calculated a similarity score between user-submitted attributes and professional player profiles to generate a personalized, data-backed training roadmap
- Added Flask-Login authentication with Werkzeug password hashing and Chart.js visualizations for player comparisons, then deployed the app to Render with Gunicorn

ZeeZ (Sleep Watch) | *Arduino, MongoDB, Express.js, Node.js, React, Groq* | Hack the Hill II



- Co-developed an IoT biometric wearable and full stack web app that measures heart rate in real time using an Arduino Nano 33 BLE and MAX30102 pulse oximeter
- Connected Arduino sensor readings to a Node.js/Express + MongoDB backend and React dashboard to visualize nightly sleep sessions and generate Groq-powered recovery suggestions

TECHNICAL SKILLS

Languages: Python, JavaScript, HTML/CSS

Frameworks/Libraries: FastAPI, Flask, React, Selenium, pandas, NumPy

Tools/Platforms: Git, Docker (multi stage builds), AWS (Athena, EC2), MongoDB, SQLite, Linux, Figma, Arduino