

Aakaash Senthilkumar

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PROFESSIONAL SUMMARY

Engineering student (Apr 2026) with strong systems-level foundations in **C**, **C++**, **Python** and **Linux**, experienced in building and optimizing real-time, distributed software. Contributed to **UBC Thunderbots** as part of a high-performance robotics team, developing control, perception, and testing software that helped achieve **2nd place at RoboCup 2024**. Brings a disciplined approach to debugging, performance optimization, and large-scale problem solving.

EDUCATION

University of British Columbia

Bachelor of Applied Science – Electrical Engineering

Vancouver, BC

Expected April 2026

EXPERIENCE

ATCO Electric Yukon

Entry Level Engineering Assistant Intern

Whitehorse, YT

Sep 2024 – Aug 2025

- Automated **generator load ratio calculations** with **VBA**, reducing manual processing time by **40%**.
- Performed **load checks & voltage drop analyses** on **Excel**; integrated **historical data into CYME**, improving network accuracy.
- Delivered **500+ technical reviews** to eliminate project backlog and accelerate approvals.
- Visualized **project need statements** in **Power BI**, enabling faster decision-making.
- Developed and thoroughly tested a **SharePoint-based Power Automate workflow** to streamline project documentation and ensure efficient review cycles.
- Handled **customer service calls** to provide load connection guidance, resolve inquiries, and communicate technical findings clearly and professionally.
- Presented **quarterly safety talks** to reinforce workplace safety culture and compliance with utility standards.
- Collaborated in **weekly engineering meetings** to review project progress and address system issues.

Pint AI (Remote) (AI driven Creative Insights for Marketing Teams)

Frontend Developer Intern

Bangalore, KA

Jun 2024 – Aug 2024

- Collaborated in a **cross-functional team** with the co-founder and senior developers.
- Built **interactive dashboard & settings pages** with **React**, **Next.js**, **Radix UI**, and **Apex Charts**.
- Integrated **backend APIs** for user and organization registration, password reset, and profile image upload.
- Developed **reusable UI components** (element tables, hover cards, sidebars, toast notifications) to enhance user experience.
- Implemented **skeleton loaders**, **dropdown fixes**, and **router improvements** to boost responsiveness and navigation.
- Improved **frontend reliability** by fixing **Eslint warnings**, refining **API integrations**, and optimizing commit workflows.

CLUBS & DESIGN TEAMS

UBC Thunderbots

Software & Electrical Team Member

Vancouver, BC

Sep 2022 – Present

- Developing high-performance software in **C**, **C++**, and **Python** on **Ubuntu Linux** for AI-driven autonomous soccer robots.
- Optimizing real-time processes and refactoring legacy modules to improve **latency**, **CPU utilization**, and **overall system throughput**.
- Collaborated with **60+ multidisciplinary members** to design, build, and deploy robots that achieved **2nd place at RoboCup 2024**.
- Implemented and debugged robot control logic, communication pipelines, and tooling using **Git**, **CMake**, and **CI workflows**.
- Maintained cross-team software reliability by writing **unit tests**, profiling code paths, and resolving concurrency and state-management issues.
- Previously designed **production-grade PCBs** in **Altium** and developed **firmware test benches** on ESP32 MCUs before transitioning to software.

PROJECTS

Python Snake Game <i>Python, Tkinter, Multithreading</i>	Sept 2023 – Dec 2023
<ul style="list-style-type: none">Designed and implemented an OOP-based Snake game with a Tkinter GUI.Ensured smooth gameplay using multithreading for concurrent event handling.Developed a responsive GUI using event-driven programming.	
Weather App <i>React, REST APIs, JS, HTML/CSS</i>	Aug 2023
<ul style="list-style-type: none">Built a React-based weather app with real-time API integration.Implemented dynamic backgrounds and cross-platform compatibility for enhanced UX.	
Chat App <i>React, Socket.io, Node.js</i>	Aug 2023
<ul style="list-style-type: none">Developed a real-time chat application with group messaging and chat room creation.Integrated Socket.io for persistent bi-directional communication and live user presence updates.	
Social Media App <i>React</i>	Aug 2023
<ul style="list-style-type: none">Created a prototype front end with user feed, friends list, and search functionality.Applied reusable React components for scalable feature expansion.	
Personal Website <i>HTML, CSS, JS, Bootstrap</i>	Aug 2023
<ul style="list-style-type: none">Designed and deployed a responsive portfolio website showcasing projects and experience.Used Bootstrap components and interactive features for a modern aesthetic.	
Tic Tac Toe vs AI <i>Java, Swing</i>	Dec 2020
<ul style="list-style-type: none">Built a GUI-based Tic Tac Toe game with an AI opponent using advanced OOP principles.Handled state transitions and win/draw logic efficiently.	
Text-Based RPG <i>Java</i>	Apr 2019
<ul style="list-style-type: none">Developed a Java-based RPG game, focusing on methods, file streaming, and error handling.	

CERTIFICATIONS

AWS Certified Machine Learning – Associate (2025)
AWS Certified Solutions Architect – Associate (2025)
AWS Certified AI Practitioner (2025)
AWS Certified Cloud Practitioner (2024)
Google Cloud Digital Leader (2025)

TECHNICAL SKILLS

Languages: C, C++, Python, Java, JavaScript (React, Next.js, Node.js), SQL, HTML, CSS
Systems & OS: Ubuntu Linux, Bash, CMake, Git, CI/CD workflows
Cloud: AWS (SageMaker, Lambda, EC2, CloudFormation), GCP (Digital Leader concepts)
Frontend: React, Next.js, Radix UI, Apex Charts, Bootstrap
Backend: Node.js, REST APIs, Socket.io
Hardware/Embedded: ESP32 microcontrollers, PCB Design (Altium), Oscilloscopes, Multimeters, Soldering, Firmware Development & Testing
Tooling & Productivity: GitHub, Trello, Discord, Slack, Notion, Power BI, MS Office
Software Engineering: OOP, Data Structures & Algorithms, Event-Driven Programming, Multithreading, Performance Optimization