

# 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)

Bangalore, KA

*Frontend Developer Intern*

*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

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

## CERTIFICATIONS

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**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

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**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