

Gowtam Krishnan Garapati

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EXPERIENCE

Stratosfy

Junior Research and Design Engineer

Ottawa, ON

Sept 2025 – Present

- Developed a **notification acknowledgment system** across **email, SMS, and push channels** using **Twilio, SendGrid, and Firebase** to track user confirmations, reducing missed critical alerts by **50%**.
- Implemented a **voice call escalation feature** through **Twilio** for urgent notifications, ensuring faster response to critical alerts.
- Built and deployed a **power loss detection algorithm** using **Python, Flask, and Pandas** to analyze freezer temperature data and automatically detect potential power outage intervals throughout the day.

Stratosfy

Software Development Intern

Ottawa, ON

Sept 2024 – May 2025

- Revamped the **login interface** using dynamic slider images and interactive buttons, improving user engagement by **25%**.
- Developed a **real-time raw data API** to display sensor readings every minute using **HTML and TypeScript**, increasing data visibility for users.
- Resolved low-battery count issues in the mobile app using **Flutter and Android Studio**, improving user satisfaction by **20%**.
- Implemented an **API portal** enabling customers to execute API calls from their end, built with **Swagger.io** for API interaction and **WordPress PHP** modules for front-end integration and hosting.

PROJECTS

AskSFU – AI Chatbot for Student Support

Feb 2025 – May 2025

Team Member

- Developed SFU's first **AI-powered chatbot** using **HTML, CSS, JavaScript** frontend integrated with **LangChain, SFU REST API, and OpenAI GPT-3.5** backend.
- Implemented a **retrieval-augmented generation (RAG)** pipeline to ensure accurate and source-grounded responses to student queries.
- Recognized by the **SFU Faculty of Applied Sciences** — showcased at the “**Decode Your Future**” event and featured in SFU's recruitment viewbook, improving student query efficiency by **60%**.

Recognition of Hesitant Speech in Audio

Jan 2025 – May 2025

Team Member

- Collected and annotated **200+ YouTube audio clips**, distinguishing hesitation-filled and fluent speech.
- Engineered **prosodic and spectral features** to train **HMM/GMM** and **SVM** models for hesitation detection.
- Achieved high precision and recall on hesitation classification, contributing to applications in **speech analytics** and **therapy systems**.

Pixel Pioneers Game

Sept 2023 – Dec 2023

Team Project

- Developed a **2D space adventure game** using **Java AWT and Swing**, inspired by Pac-Man, collaborating with a 3-member team.
- Implemented the **A* algorithm** for AI pathfinding and performed unit and integration testing for stability.
- Delivered a complete, bug-free game, strengthening knowledge of **AI pathfinding** and **object-oriented design**.

EDUCATION

Simon Fraser University

Burnaby, BC

Bachelor of Science in Computing Science

May 2025

- Relevant Coursework: Operating Systems, Artificial Intelligence, Computer Vision, Algorithms, Data Structures, Computational Data Science, Natural Language Processing, Affective Computing.

TECHNICAL SKILLS

- Java, Python, HTML, CSS, JavaScript, TypeScript, Flutter, Git/GitHub, Docker, SQL, C, C++, PHP, RISC-V Assembly
- Flask, Pandas, Firebase, Twilio, SendGrid, Swagger.io, AWS (S3, Route 53)