

# Rahul Cheruku

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## EDUCATION

September 2020 - Present

**Bachelor of Engineering, Systems and Computer Engineering**  
Carleton University, Ottawa, ON

- Fourth year standing, 9/12(B)
- Expected graduation: May 2025

## WORK EXPERIENCE

**Design Technician – Planview Utility Services Limited** **May 2024 – Present**

- **Performed non-linear pole line calculations** using SpidaCalc and provided design solutions for non-compliant pole lines.
- **Collaborated with clients and third parties** to review permit applications, discuss design standards, and ensure project requirements are met.
- **Assisted in AutoCAD** updates and supported project teams in meeting deadlines, budgets, and overall project objectives.

**Standards Co-op – Hydro Ottawa Limited** **January 2023 – December 2023**

- **Collaborated with a team of engineers** to develop organizational standards and optimize document management using AODocs with version control functionalities.
- **Proficient in SpidaCalc** for modeling electrical infrastructure in city development projects and utilized Excel/Sheets macros and formulas to organize meta-data for document migration.
- **Managed third-party requests** for asset assessment, processed As-Built drawings to locate assets, and contributed to risk assessments and mitigation plans in the Distribution Engineering Sector.

## RELEVANT SKILLS

- **Developed embedded Arduino code** to control and automate the operation of a snow plough system, integrating sensors and motor drivers for autonomous functionality.
- **Implemented embedded C code** for an RC controller in a 4th-year engineering capstone project, enabling precise manual control and system reliability.
- Utilized **Python** programming for Raspberry Pi development, contributing to diverse projects and demonstrating proficiency in embedded systems development.
- **Proficient in Java programming**, with expertise in implementing real-time systems and utilizing UDP/IP protocols to develop efficient and responsive applications, including the use of RPC (Remote Procedure Call) for seamless communication in distributed systems.
- **Proficient in Verilog and VHDL**, utilizing expertise in processor design and FPGA development to excel in hardware description languages for digital system implementation, enabling efficient and reliable hardware solutions.
- Demonstrated proficiency in version control with **Git** and collaborative development on **GitHub**, ensuring efficient code management and teamwork.

- **Exhibited strong engineering management skills**, effectively collaborating in group projects and applying asset and risk management principles to develop mitigation plans and ensure timely, successful project outcomes.
- **Designed and simulated electrical infrastructure** for city development projects, leveraging engineering principles for efficient solutions.
- **Created and validated technical standards**, conducting calculations, analysis, and simulations to ensure specifications were met across diverse scenarios.

## **APPLIED PROJECTS**

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### **RC Controller Integration for Autonomous Vehicle**

**September 2024 - December 2024**

Project Lead – Safety and Reliability Team

- Directed the integration of an RC controller for manual override in the autonomous vehicle project, utilizing Arduino and the FS-i6X system for precise control and safety.
- Ensured seamless communication between the RC system and the vehicle's control board, providing real-time testing and troubleshooting support to ensure system reliability and response.
- Developed project standards for the RC controller integration, establishing guidelines for modularity and ease of integration, ensuring consistent design practices and simplifying future system upgrades and component additions.

### **Autonomous Snow Plough System**

**September 2024 - December 2024**

Project Lead

- Led the development of an autonomous snow plough system using Arduino, integrating sensors and motor drivers to automate snow removal, obstacle avoidance and boundary adherence.
- Coordinated the project team, ensuring smooth collaboration and timely completion of tasks, while overseeing the implementation of the system's safety and reliability features.

### **Home Security System**

**January 2024 - April 2024**

Project Lead

- As project lead, developed a home security system on Raspberry Pi using Python, overseeing code implementation and project documentation for comprehensive functionality.
- Provided technical guidance and support to team members, ensuring cohesive collaboration and successful project completion within designated timelines.

### **Elevator Project Development**

**January 2024 - April 2024**

Lead Programmer

- Collaborated closely with a multidisciplinary team to iteratively design and implement the Java-based elevator system, fostering a dynamic and efficient development environment.
- Designed and implemented comprehensive test suites to ensure the reliability and efficiency of the Java-based elevator system.

### **Tic Tac Toe game**

**March 2022 – April 2022**

Programmer

- Implementing the concepts of Graphic user Interface in **Java** to make the game more lively.
- Analyzed and programmed the testing framework for various scenarios of the game.

## **VOLUNTEER EXPERIENCE**

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### **International Orientation Ambassador**

**June 2023 – Present**

International Student Services Office, Carleton University, Ottawa, Ontario

- Welcomed international students to Carleton University through the International Orientation Week conducted virtually.
- Support virtual activities like welcoming events, social activities, international student panels, and ice-breaker activities for the new international students.

### **Frosh Facilitator**

**June 2022 – September 2022**

Engineering Frosh Representative

- Support social, cultural, family friendly, and wellness opportunities that connect and engage the students throughout the orientation period.
- Support virtual social events and Workshops by facilitating activities.
- Review Frosh programs and activities.