

# Landon Reed

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[github.com/LReed03](https://github.com/LReed03) | [reed03.github.io/portfolio](https://reed03.github.io/portfolio)

## EDUCATION

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### Schulich School of Engineering, University of Calgary

May 2028

*Bachelor of Science, Software Engineering*

*Calgary, AB*

- **GPA: 3.36 / 4.00**
- **Relevant Coursework:** Data Structures and Algorithms, Full Stack Web Development, Object-Oriented Principles, Applied Operating Systems, Networked Systems, Embedded Systems, Database Management

## EXPERIENCE

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### Software Developer

October 2025 – Present

*CalgaryToSpace*

*Calgary, AB*

- Developed embedded Rust software for CubeSat flight systems, ensuring deterministic execution, memory safety, and fault-tolerant behavior in orbit-critical components
- Engineered telemetry ingestion and synchronization services processing live spacecraft data across distributed ground stations, improving data reliability and visibility for 5+ subsystem teams
- Contributed to internal automation pipelines for build, test, and deployment of mission software
- Collaborated closely with hardware, RF, and power teams to integrate software with STM32 and Rust-based onboard components

## PROJECTS

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### Course Management Dashboard | *React, Flask, PostgreSQL, Firebase*

July 2025 – Present

- Built a full-stack academic planning platform (React + Flask + PostgreSQL), enabling students to organize courses, deadlines, and schedules in a centralized dashboard .
- Designed RESTful APIs with Flask and SQLAlchemy to support CRUD ops for course/task/schedule data, improving data reliability and reducing backend query complexity.
- Integrated Firebase Authentication with Flask JWT token validation for secure, role-based user authentication, authorization, and access control, ensuring data integrity and privacy.
- Architected a modular React front-end using hooks, reusable components, and responsive layouts, improving maintainability and device compatibility across desktop and mobile.

### Powerlifting Web Application | *React, Flask, BeautifulSoup*

May 2025 – June 2025

- Built a full-stack powerlifting stats platform with athlete search, comparison, and profile pages by scraping live data from OpenPowerlifting using BeautifulSoup
- Implemented advanced athlete-matching logic including name disambiguation, manual entry with validation, and dynamic ranking calculations (lifts, gender, weight class, competition history).
- Developed a responsive React UI with custom components, real-time state updates, and smooth UX for browsing, filtering, and comparing lifters.

### Disaster Victim Tracking System | *Java, Junit, PostgreSQL*

January 2025 – April 2025

- Built a disaster-response management system to track victims, inquirers, medical records, and family links, backed by a PostgreSQL relational database.
- Designed and implemented normalized data models and SQL schemas to ensure consistent record linking, fast search, and reliable data integrity across emergency cases.
- Applied Test-Driven Development with 50+ JUnit test cases validating CRUD operations, input logic, and relationship integrity.
- Designed system architecture using MVC and centralized DB state via a Singleton pattern, enabling clear separation of concerns, easier testing, and controlled shared resource access.

## TECHNICAL SKILLS

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**Languages:** Python, Java, SQL, HTML, CSS, JavaScript, C, C++, Rust

**Frameworks:** React, Flask, BeautifulSoup, SQLAlchemy

**Developer Tools:** Git, PostgreSQL, JUnit, MySQL, Firebase, SQLite, VS code