

# Caleb Charles Rickenbach

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## EDUCATION

### South Dakota School of Mines and Technology

#### Bachelor of Science (B.S), Computer Engineering

- Expected Graduation: May 2028
- GPA: 4.0 / 4.0
- Member of the South Dakota School of Mines Football Team

Rapid City, South Dakota, United States

August 2024 - Present

## SKILLS AND ABILITIES

- **Programming Languages:** C++, Rust, Python, Dart, JavaScript, C#, Java
- **Web & Mobile Development:** Node.js, React, Angular, MongoDB, Firebase
- **Other Areas of Knowledge:** UX Design, Cybersecurity, Cryptography

## EXPERIENCE

### Aerostar International

Sioux Falls, South Dakota, United States

#### Incoming Software Engineering Intern

May 2026 - August 2026

- Selected to join the Stratospheric Balloon Division targeting embedded development on secure systems with C/C++ and Rust.

### Phase Technologies

Rapid City, South Dakota, United States

#### Computer Science Intern

May 2025 - August 2025

- Engineered a custom printing system to automatically generate labels and automate the printing of critical documents throughout the manufacturing process, resulting in a more efficient system.
- Helped maintain and improve the company's internal API, addressing bugs and improving system reliability.
- Developed and implemented intuitive user interfaces that helped engineers and technicians interact with the company's internal workflow.

### Juniper Cattle Company

Oelrichs, South Dakota, United States

#### Employee

May 2021 - August 2024

- Managed and carried out projects that advanced the company's infrastructure.
- Maintained equipment and infrastructure within the company.
- Monitored livestock health, including administering vaccinations and treating injuries in high-pressure situations.

## PROJECTS

### Cowbell

#### Published App on Android and iOS



- Developed and published 'Cowbell,' a cross-platform application built with Flutter, to help ranchers with herd management and keeping track of daily tasks.
- Utilized Firebase as a backend to ensure real-time data synchronization and secure storage of user information.
- Incorporated a generative AI-powered voice feature to automate tasks and provide a hands-free user experience for ranchers in the field.

### FeederAce

#### Published App on Android and iOS



- Developed the FeederAce ecosystem, comprising a custom hardware unit and mobile controller to digitize manual agricultural equipment interfaces.
- Designed the hardware and enclosure for the FeederAce unit, providing a 5-minute setup for users.
- Designed unit firmware utilizing hardware-enforced Secure Boot and Flash Encryption to prevent tampering, while enabling Bluetooth Low Energy communications and verified OTA updates with rollback capabilities.
- Designed a cross-platform mobile app to control the unit, which supports installing firmware updates to the unit from a remote server, ensuring seamless field deployment.

## ADDITIONAL INFORMATION

- **Relevant Coursework:** Circuits II, RISC Assembly, Data Structures & Algorithms, Digital Systems
- **Languages:** English (Native Speaker), German (Proficient).