Charles Arroyo

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 github | linkedin

EDUCATION

Iowa State University   **Aug 2022 - 2026**

Bachelors of Science - Software Engineering, GPA: 3.5   *Ames, IA*

SKILLS

Languages   Java | Python | C | HTML/CSS/JavaScript | SQL | Swift

Frameworks   React | SwiftUI | Spring | JUnit

Tools   VS Code | Eclipse | Intellij | Git | Figma | MySQL | Team Center | Git Lab CI/CD

EXPERIENCE

Collins Aerospace   **Jun 2024 - Present**

Software Engineer, Co-op   *Jamestown, ND*

- Developing and maintaining internal Java code base to work as a middleware application for PLM systems.
- Implemented data queries and session/SSO management through Java API calls of the PLM system.
- Transformed data into style sheets by leveraging HTML, JS, and Tailwind, providing a more intuitive UI.
- Utilized Eclipse debugging tools to identify and resolve bugs/issues within legacy codebase.

Iowa State University   **Jun 2023 - Jun 2024**

Information Technology Technician   *Ames, IA*

- Delivering customer satisfaction and resolving issues across computer software, hardware, and networks.
- Efficiently completing 10 technical support requests per shift, demonstrating time management skills.
- Supervising internet system maintenance via MECM and Active Directory to optimize database performance.

Iowa State University   **Sep 2023 - Oct 2023**

Bootcamp Teaching Assistant   *Ames, IA*

- Aided in 6 comprehensive labs and guided approximately 30 students on hands-on programming exercises.
- Designed and built lab exercises and graphical user interfaces (GUIs) to enhance student engagement.

AgCertain   **May 2021 - Dec 2021**

Engineering Intern   *Ames, IA*

- Subordinated shipping and receiving operations, optimizing workflows and enhancing firm's supply-chain.
- Conducted 20+ tests daily to validate products' and customer compliance with extreme attention to detail.
- Revamped multiple standard operating procedures for improved operational efficiency and optimization.

PROJECTS

Mobile Card Game (Java/Spring/AS/Swift/SQL), View The Project Here ⧉   **Jan 2024 - May 2024**

Full Stack Developer, Team Manager   *Ames, IA*

- Led an Android/Swift application that digitizes the card game Coup. Awarded Best Manager out of 200 entrants.
- Designed complex and aesthetic user interfaces using ConstraintLayout, GridLayout, and Figma.
- Developed RESTful APIs for game logic, user authentication, and content delivery, enabling scalable interactions.
- Established WebSocket endpoints for real-time server-client communication within the game.
- Integrated SQL for backend data storage and managing relational databases (one-to-one, one-to-many).
- Currently migrating front end code to Swift, while maintaining a connection to the existing back end code.

iRobot Automotive Embedded System Application (C, Python), View The Project Here ⧉   **Aug 2023 - Jan 2024**

Embedded Systems Engineer   *Ames, IA*

- Built an iRobot application simulating adaptive cruise control, lane assistance, and object detection/avoidance.
- Integrated precise servo control for accurate turning movements, ensuring safety and efficiency.
- Collaborated with classmate to complete project within 15 weeks, demonstrating project management skills.

Assistive Technology For Users With Speech Difficulties (C), View The Project Here ⧉   **Aug 2022 - Dec 2022**

Application Developer   *Ames, IA*

- Built a text-based communication application designed to empower individuals with speech difficulties.
- Achieved memory management using pointers and arrays, allowing users to selectively delete phrases.
- Designed a GUI which is compatible with a gaming controller or keyboard through SDL2 libraries.