

# Jesus Soto González

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## Education

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**Iowa State University** | Ames, IA

Bachelor of Science in Software Engineering

GPA: 3.61

Minor in Artificial Intelligence

Expected Graduation: December 2025

Relevant Coursework: Data Structures and Algorithms, Embedded Systems, Operating Systems, Web Development, Database Management Systems, Principles of Artificial Intelligence, Machine Learning, Natural Language Processing.

**Des Moines Area Community College** | Ankeny, IA

Associate of Applied Science in Diesel Technology

GPA: 3.77 | Graduated: May 2021

## Technical Skills

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**Programming Languages:** C, C++, Python, JavaScript, TypeScript, Java, SQL

**Frameworks/Tools:** React, Node.js, Git, Linux, MySQL, REST

**Platforms:** ROS2, Unity, Android SDK

## Projects

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**GridAI – Smart Grid Management Platform** | Senior Design Project

Tech: *React, TypeScript, Kafka, Firebase, WebSockets*

- Built a customizable widget system for live electric grid telemetry with real-time JSX editing.
- Integrated Kafka and WebSockets for streaming grid data into dynamic, user-defined dashboards.
- Developed secure RESTful APIs for widget management with Firebase auth and Firestore persistence.

**Probabilistic Escape-Pursuit Planning** | Principles of Artificial Intelligence Final Project

Tech: *Python, NumPy*

- Developed a top-ranked AI agent for a probabilistic multi-agent grid simulation with uncertain movement.
- Combined A\* pathfinding with a rotation-aware strategy using EMAs and a sliding window estimator.
- Achieved 1st place by dynamically switching between pursuit, evasion, and neutral modes based on real conditions.

**Fully Autonomous System Development** | CprE 288 Embedded Systems Final Project

Tech: *C, iRobot, Sensors*

- Programmed autonomous navigation using SONAR and IR sensors with real-time obstacle avoidance.

**Kitchen Mingle – Android Recipe Finder App** | COM S 309 Software Development Practices Team Project

Tech: *Java, Spring Boot, MySQL, Android SDK*

- Built RESTful APIs and database schema for recipe search and user features.
- Integrated backend with Android frontend in an Agile, team-based environment.

## Work Experience

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**Brown National Lease** | Iowa Falls, IA

*Certified Diesel Technician* | May 2021 – May 2022

- Diagnosed and repaired complex mechanical systems, applying analytical problem-solving skills.

**Iowa Select Farms** | Jewell, IA

*Maintenance Technician* | August 2017 – May 2021

- Developed troubleshooting procedures for equipment failures, enhancing critical thinking and reliability.

## Leadership / Activities

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**Cardinal Space Mining Club** | Safety Officer

- Oversaw safety protocols and contributed to controls system development and prototype testing.

**Software Engineering and Computer Science Club** | Member

- Contributed to collaborative coding sessions and tech talks focused on modern software practices.

**SHPE** | Member

- Collaborated with peers in workshops and events focused on Latino excellence in STEM.