

Lucas Horn

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EDUCATION

Bachelor of Software Engineering

IOWA STATE UNIVERSITY | Anticipated: Spring 2027

GPA: 3.86 | Top 2% of Engineering Freshmen Fall 2023 | Dean's List

PROJECT EXPERIENCE

Weather Prediction AI Models | Personal Project

August 2025 - Present

- Developed neural networks from scratch in Java, implementing multi-threading to accelerate training and forecast weather patterns from climate datasets, exploring multiple architectures.
- Expanded experimentation to Python, self-learning PyTorch to refine models, tune parameters, and achieve consistent prediction accuracy within 1°C.
- Built logging systems and plotted expected vs actual predictions to analyze neural network performance, enabling targeted debugging and iterative improvements.

Study Buddy App Development | Class Project

January 2025 - May 2025

Awarded: Most Heart - by Iowa State University Faculty

- Collaborated in a three-member team to design a student-focused platform connecting classmates through enrolled courses, enabling messaging and scheduling of study sessions.
- Solely developed the backend code, including APIs and database structure in Spring Boot and MySQL, and created test cases to ensure functionality.
- Implemented a CI/CD pipeline with automated testing, streamlining deployment, and ensuring reliable, maintainable application delivery.

Assistive Communication Application | Class Project

December 2023

- Built a C-based assistive communication application enabling individuals with speech difficulties to convey messages using DS4 (PS4) controller inputs via Bluetooth.
- Applied debouncing and joystick deadzones to ensure precise and reliable input detection.
- Managed memory dynamically with malloc to optimize message data handling.

LEADERSHIP EXPERIENCE

Google Developer Groups | Iowa State University

August 2024 - Present

Vice President

- Coordinate with club leadership on a weekly basis to plan and organize future meetings and allocate funding.
- Conduct meetings that aim to teach students new frameworks, languages, or soft skills.

Jones House in Eaton Residence Hall | Iowa State University

August 2024 - May 2025

President

- Planned house events for 35 residents, including poker and Smash Bros tournaments and game nights.
- Contributed to hall-level events for 300 residents, managing raffles, activities, and gifts for custodial staff.

RELEVANT SKILLS

- Programming Languages:** Java, Python, C, JavaScript, HTML, CSS
- Databases:** MySQL, MongoDB
- Frameworks:** Spring Boot, React, Node.js, Express, Flask
- Machine Learning / AI:** PyTorch

JOB EXPERIENCE

City of Cedar Rapids

Summer 2023, 2024, 2025

Lifeguard, Swim Lesson Instructor

- Responded to emergencies with quick decisions and clear communication, directly saving two lives.
- Taught beginner swim lessons and safety skills to children through clear communication and patience.