

Isaac Kenyon

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Education

Iowa State University, Ames, IA

Bachelor of Science in Computer Engineering

Cumulative GPA: 3.2/4.0

Expected May 2026

Work Experience

Hardware Design Intern, Daktronics, Brookings, SD

January 2024 to August 2024

- Qualified new module prototypes and caught problems resulting in new hardware revisions.
- Automated three FPGA dev environments that mapped into an internal Azure DevOps system.
- Designed a new cost-effective temperature sensor and wrote firmware code to support the chip.
- Implemented power saving features on LED CCDs for an eco-smart product line.
- Performed lab work with a spectroradiometer, EMI instruments, and temperature chambers.

Academic Project Experience

VHDL MIPS Processor Project

August 2023 to January 2024

- Worked as a team of two to develop a fully functional MIPS design starting from logic gates.
- Utilized scalar pipelining in our design to increase the throughput of instructions.
- Used ModelSim to simulate and debug VHDL components and for testing the final top entity.

Autonomous Tractor Model Project

January 2023 to May 2023

- Developed C code for a microcontroller and used a small library for specific functionality.
- Learned how to use electric motors, radar, and ultrasonic sensors for movement and navigation.
- Created a terminal interface for single command use or the ability to swap to autonomous mode.
- Succeeded as a four-person team divvying work based on experience and interests.

Personal Projects

Content Display - Server

May 2024 to August 2024

- Chose FreeBSD as the local server OS for fun projects to share with my roommates.
- Wrote a Python application that can show content on a display setup.
- Interfaced with a web server to allow my roommates to control what is displayed on the screen.
- Revised UI interface based off improvement requests of the web site users.

Scramble – Encryption

June 2023 to August 2023

- Developed a private key encryption algorithm for files on a system.
- Implemented the use of a hash function to increase security and provide linear execution time.
- Finished the project by making use of a command-line interface, scripts, and icons.

Algorithmic Text Detection (ATD)

June 2023 to August 2023

- Applied lexical and syntax tokenization techniques to analyze large amounts of ASCII text.
- Made use of learned tree data structures to store serialized data based on sentence structure.
- Created a binary file format for saving text efficiently and the ability to transfer learned data.

Skills

Languages: C, Java, Python, VHDL, JavaScript, Tcl, Verilog, PHP, PowerShell, Bash, SQL, MIPS, x86_64.
Software: Lattice, Gowin, Efinity, Quartus II, Questa Sim, Microsoft Office, SpringBoot, *nix, Linux, FreeBSD, Git, Flask, Makefile, FL Studio.