Thomas Bioren
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Objective

To obtain a Summer 2025 internship in the Computer Science/Software Engineering fields.

Education

Rose-Hulman Institute of Technology **Bachelor's in Computer Science** | GPA : 3.20 *May 2026*

Related Courses Taken: Object-Oriented Software Development, Introduction to Systems Programming, Data Structures and Algorithm Analysis, Computer Architecture I

Related Courses Planned Before Summer 2025: Database Systems, Introduction to Web Programming, Computer Architecture II, Programming Language Concepts, Software Requirements Engineering, Operating Systems, Design and Analysis of Algorithms, Software Architecture and Design, Advanced Topics in Computer Architecture

Professional Summary

An organized and dedicated Computer Science student pursuing a Bachelor's degree at Rose-Hulman Institute of Technology. Experienced in React, Agile development, and working with groups.

Technical Skills

Languages: C#, Python, Java, JavaScript, HTML/CSS
Tools: React Native, Firebase, Flutter, Linux, Git
Others: Agile, Debugging

Experience

Rose-Hulman Ventures | *Rose-Hulman Institute of Technology* *Spring 2024 - Summer 2024*
- Used React Native to create a multi-platform app for managing forms.
- Acted as a leader in a group of 3

Object-Oriented Software Development TA | *Rose-Hulman Institute of Technology* *Fall 2023 - Winter 2024*
- Assisted groups of 3-4 create their final project, an arcade game or genetic algorithm research project written in Java.
- Worked with about 10 other TAs to efficiently grade assignments.
- Hosted office hours where students came in for help with assignments. Learned how to efficiently understand unique issues with code and effectively communicate a solution.

Accelerated Math Physics Counselor | *Rose-Hulman Institute of Technology* *Summer 2023*
- Tutor and grader for Physics I and II and Multivariable Calculus.
- Counseled students throughout this intensive program.
- Organized group activities and handled administrative responsibilities.

Projects

Evolvable Hardware | *Research, Python, Linux* *Fall 2023 - Present*
- Using evolutionary algorithms to evolve an FPGA's bitstream to complete a desired task (tone generator/discriminator, radio, etc.)
- Use Python to control the evolution of bitstreams uploaded to the FPGAs. Record output of the bitstreams with an Arduino, and score their fitness.
- To learn more, visit evolvablehardware.org

Accumulator-Based Processor | *Verilog, Assembly, Hardware Design* *Winter 2024*
- Designed and implemented a novel instruction set architecture (ISA) based on an accumulator.
- Uses a unique, ARM-style, status flag register to control branch instructions.

EditorTrees Project | *Java, Data Structures, Binary Search Trees* *Fall 2023*
- Created a binary search tree based text editor in CSSE230, a data structures and algorithm analysis class.
- Implements complicated binary tree rotations to keep the tree balanced.
- Balance tokens are used to ensure efficiency in determining when rotations should be used.