Ryan Dexter Harmon

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Education

Rose-Hulman Institute of Technology	Terre Haute, IN
Bachelor of Science in Computer Science, Minor in Economics	May 2025
International Baccalaureate Graduate	May 2021

Skills

Languages: Java, Python, Rust, C, C++, C#, JavaScript, SQL, Scheme, Verilog, Assembly
Frameworks & Tools: Node.js, OpenGL, Git, Docker, Quartus, Agile/Scrum, Waterfall
Databases: MySQL, PostgreSQL
Data Science / ML: Pandas, NumPy, Scikit-learn, TensorFlow
Other: Linux/Unix, VS Code, Eclipse
Foreign Languages: French (4 years), German (1 year)

Experience

Government Developer – Washoe County   **June - August 2024**
- Designed and developed a full-stack booking platform to streamline inmate intake processes.
- Simplified indigent status cataloging, reducing manual data entry.
- Migrated login system to Microsoft account synchronization, implementing group-based security protocols.
- Collaborated directly with government stakeholders to gather requirements and deliver on deadlines.

Government IT Intern - Washoe County   **June - August 2023**
- Provided IT support across 1000+ users, resolving hardware/software issues
- Assisted in network infrastructure maintenance and cybersecurity monitoring for critical systems.
- Gained hands-on experience with troubleshooting, system upgrades, and secure configuration.

Projects

Rust ASCII Animation Framework (Rust + OpenGL)   **August 2024 - May 2025**
- Built a Rust-based API for async/await ASCII animations with GPU-accelerated rendering via OpenGL.
- Improved animation performance by eliminating CPU throttling and enabling smooth rendering.
- Designed for accessibility, allowing developers to create animations with minimal code.

Programming Language Interpreter (Scheme)   **November 2022 - February 2023**
- Implemented lexical analysis, syntax parsing, and code execution for a Scheme interpreter.
- Validated through 200+ test programs; achieved full execution support for core Scheme features.
- Collaborated with a partner, dividing responsibilities effectively and resolving design challenges.

Custom Computer Processor (Verilog)   **February - May 2023**
- Designed and tested a custom accumulator processor with a 4-person team.
- Implemented in Verilog and benchmarked to analyze instruction cycle performance.
- Learned end-to-end design workflow: from brainstorming and architecture to simulation and testing.

Activities

RoboMasters Robotics Team – Controls Subgroup
- Designed and programmed robot control frameworks in C++/Python for international robot combat competitions.
- Integrated external sensors and hardware with real-time robot control systems.
- Contributed to the successful design and deployment of 3 competition robots.