

Edgar Reyes-Rivera

Cincinnati, Ohio

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Education

Miami University <i>Bachelor of Science in Computer Engineering</i> <i>Bachelor of Science in Computer Science</i>	Oxford, OH <i>Expected May 2027</i> <i>GPA: 3.26</i>
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Skills & Certifications

Languages: C++, C, SystemVerilog, Verilog, CUDA, Python, Java, C#, MIPS Assembly, SQL, Scheme, Prolog
Hardware & Embedded: FPGA Development, RTL Design, RISC-V Architecture, Vivado, Quartus, I2C, SPI, UART
Technologies & Tools: Linux, Virtualization, Multi-threading, Git, GitHub, Agile Methodologies, JIRA, Bitbucket, Confluence
Certifications: Ohio Southwest Alliance on Semiconductors and Integrated Scalable Manufacturing (O.A.S.I.S)

Experience

Synchrony <i>Software Engineer Intern</i>	Cincinnati, OH <i>July 2024 – September 2024</i>
<ul style="list-style-type: none">Engineered and delivered technical solutions as a member of a remote, agile Enablement Architecture team.Researched and prototyped software packages, providing data-driven recommendations to meet team requirements.Contributed to the development of B2B software for loan processing and private label credit cards.Utilized Atlassian tools (JIRA, Bitbucket, Confluence) to manage project tasks and collaborate on code development.	

Projects

TinyRISC-V RV1 Processor	🌐 Project Details
<ul style="list-style-type: none">Designed and implemented a single-cycle 32-bit RISC-V processor (RV1) in Verilog, supporting a subset of the RISC-V ISA including arithmetic, logical, and memory access operations.Developed a custom assembler in Python to convert RISC-V assembly into machine-readable binary for the processor.Verified processor functionality and instruction execution through extensive testing.	
FPGA-Based Gaussian Blur Image Processing	🌐 Project Details
<ul style="list-style-type: none">Engineered a Gaussian blur filter on a Cyclone V SoC FPGA using Verilog on Quartus.Processed a 160x120 .mif image through a 3x3 Gaussian kernel and scaled the output to a 640x480 VGA display.Implemented efficient memory management with double buffering and fixed-point arithmetic, achieving approximately 16ms processing time per frame.	

Leadership & Service

President, Society of Hispanic Professional Engineers (SHPE)	<i>August 2023 – Present</i>
<ul style="list-style-type: none">Lead student chapter, delegate roles to the executive board, and represent SHPE at university-wide meetings.Establish and maintain collaborations with corporate sponsors and other campus organizations.	
Student Intern, A.S.P.I.R.E.	<i>March 2024 – Present</i>
<ul style="list-style-type: none">Analyze data on university diversity initiatives to create reports for state and federal representatives, advocating for program funding and support.	
Judge, FIRST Tech Challenge	Oxford, OH
<ul style="list-style-type: none">Evaluated 27 high school robotics teams on project design, innovation, and teamwork.	

Relevant Coursework

Computer Engineering: Digital Systems Design, Computer Organization, Embedded Systems Design, Electric Circuit Analysis I
Computer Science: Data Abstractions & Structures, Algorithms I, Object-Oriented Programming, Systems I & II, Database Systems, Comparative Programming Languages