Jack Ryan Bonfiglio

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EDUCATION

Binghamton University, State University of New York, Watson College of Engineering and Applied Science
Bachelor of Science in Computer Engineering | Bachelor of Arts in Mathematical Science   *Expected May 2024*
Cumulative GPA: 3.47/4.00

Manhattan College, School of Engineering
Bachelor of Science in Computer Engineering   *August 2020 – May 2021*
Cumulative GPA: 3.70/4.00 | **Dean's List**: Fall 2020 - Spring 2021

TECHNICAL SKILLS

Languages: Node.js, Python, C, MATLAB, VHDL, Verilog, SystemVerilog, TCL
Programs: Gitlab, Git, Vivado, Xilinx Vitis, Microsoft Office, SPSS, AutoCAD, Dynatrace, Visual Studio Code

PROJECT EXPERIENCE

32 Bit Binary Long Division
Lead Developer   *November 2023 – December 2023*
● Designed via an algorithmic state machine to output a 32-bit quotient and remainder when given a 32-bit divisor and dividend along with the ability to detect and output an error if the divisor is zero
● TCL scripts and procedures were created to ensure the design met the required area and timing constraints of under 108 Slice LUTs and a minimum clock frequency of 250MHz while sending the resource and timing reports to a .txt file
● Implemented and rigorously tested using Verilog via the Vivado Design Suite

Freestanding Metal Detector
Team Member   *March 2023 – May 2023*
● Worked on a team of electrical and computer engineers to develop a bare-metal system to detect, locate, and keep count of metal washers that have interacted with the magnetic field
● Integrated custom intellectual property blocks via Vivado to detect changes in voltage through the Bayes 3 PMOD ports
● Using Xilinx Vitis IDE, a detection algorithm was developed using embedded C techniques to optimize resource usage

Multi-Cycle ARM Processor
Team Member   *November 2022 – December 2022*
● Collaborated as a group to develop and implement the datapath and control unit for a multi-cycle advanced RISC machine processor using the Xilinx ISE environment
● Supported logical bitwise operations and memory management such as reading and writing from memory
● Successfully programmed onto the Digilent Bayes 3 FPGA board to perform instruction using various forms of I/O

PROFESSIONAL EXPERIENCE

Northwestern Mutual   **Milwaukee, WI**
Software Engineer Intern   *June 2023 – August 2023*
● Developed synthetic monitors for the company's in-house Customer Relationship Management platform that sends Slack notifications in the case of a platform outage
● Worked with AWS and EC2 instances refreshing to allow a more streamlined approach to launching and updating your application deployments running on EC2
● Exposed to general scrum methodology and worked closely with scrum masters and the Jira user interface

Firefly Landscaping   **Orangeburg, NY**
Electrician Apprenticeship   *August 2020 – April 2021*
● Installed, tested, and designed circuits in which outdoor lights were installed around customers' homes
● Received hands-on training with low-voltage electronics such as circuit breakers and LED lights

LEADERSHIP AND INVOLVEMENT

Binghamton University, Club Lacrosse
Team Member
● Starting goalie for the team during our 6-1 season in 2022-2023 in which we made the National Championship tournament