Nathan Rizza

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Technical Skills

Programming Languages: C, C++, VHDL, Shell Scripting, Python, System Verilog, Matlab, Latex
Engineering Tools: ModelSim, Vivado, Quartus, KiCad, Solid-Works, Synopsis VCS, Jasper Gold
Areas of Interest: FPGA, Computer Architecture, Digital Design
Familiar Operating Systems: Linux, Windows

Education

Graduate: University of Florida, Fall 2021 – Fall 2022
Degree: Electrical and Computer Engineering Masters of Science
Depth: Computer Engineering Breadth: Signals and Systems
GPA: 3.84

Undergraduate: Saint Vincent College, Fall 2017 - Spring 2021
Major: Mechanical Engineering
Minors: Computer Science, Math
GPA: 3.7

Work Experience

Graduate Assistant – University of Florida, Jan 2022 – Ongoing
Performed research, wrote reports and delivered presentations on the topic of FPGA and HLS as they relate to computer hardware security for the Electrical and Computer Engineering department.

Circuit Designer - SurfPlasma, Aug 2021 – Dec 2021
Designed a controller to regulate power to the portable plasma reactors based on the readings of different sensors for consumer and corporate use cases.

Research and Projects

Framework for Mitigating Vulnerabilities in HLS Jan 2022 – Ongoing
Modified the open source HLS tool Bambu to detect and fix security vulnerabilities. Performed design verification on the design's produced Verilog Code.

Soft Materials Tester Sep 2020 - May 2021
Designed and built an Arduino micro-controller based soft materials tensile tester for the Saint Vincent College Engineering Lab.

Decision Making Risk Minimization Algorithm Sept 2020 - May 2021
Wrote literature reviews, created 3D printed parts in CAD software, and performed circuitry design. Built an autonomous model car which was controlled using a risk minimization Algorithm.