

# Nathan Rizza

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## Education

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### **Graduate: University of Florida, Fall 2022**

- Degree: Electrical and Computer Engineering Masters of Science
- Depth: Computer Engineering      Breadth: Signals and Systems
- GPA: 3.84

### **Undergraduate: Saint Vincent College, Spring 2021**

- Major: Mechanical Engineering
- Minors: Computer Science, Math
- GPA: 3.7

## Work Experience

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### **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 business use cases.

## Research and Projects

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### **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 generated Verilog Code.

### **Soft Materials Tester Sep 2020 - May 2021**

- Led a team in designing and building 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.

## Technical Skills

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### **Programming Languages:**

- C, C++, VHDL, Shell Scripting, Python, System Verilog, Matlab, Latex

### **Engineering Tools:**

- ModelSim, Vivado, Quartus, KiCad, Solid-Works, Synopsis VCS

### **Familiar Operating Systems:**

- Linux, Windows