

# Jason Blocklove

COMPUTER ENGINEERING MS/BS CANDIDATE

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## Objective

A full-time position with a focus in hardware design or embedded systems

## Education

**Master of Science/Bachelor of Science in Computer Engineering | Rochester Institute of Technology**

*Graduation Date: May 2020*

- GPA - 3.64/4.0

*Rochester, NY*

**Master's Thesis Research | Hardware Obfuscation**

- Investigating various methods of intellectual property protection through hardware obfuscation
- Analyzing differences in popular hardware obfuscation methods to determine their effectiveness in common threat models

## Experience

**SICOM Systems | Research & Development Co-Op**

*May - August 2018*

- Designed and developed a comprehensive testing system for order confirmation units
- Developed an ePayment system for university campuses with a point of sale terminal using external APIs
- Utilized a Linux subsystem to implement an HID card reader on a point of sale terminal system
- Worked on reverse engineering a device to determine how to modify the current system to interface with new hardware

*Lansdale, PA*

**Johnson & Johnson | Computer Engineering Co-Op**

*June - December 2017*

- Used Java to develop and disseminate creation tool for Outlook distribution lists
- Created numerous Excel and Outlook macros to streamline day-to-day work

*Raritan, NJ*

**RIT Computer Engineering Department | Lab Instructor/Lead Teaching Assistant**

*January 2017 - Present*

- Managed teams of up to 10 TAs, and helped students with technical problems encountered in lab
- Taught circuit troubleshooting principles, re-taught key lecture principles, addressed lab-related questions, graded labs
- Assisted students in Digital System Design I and II, and Interfacing Digital Electronics labs

*Rochester, NY*

**RIT Computer Engineering Department | Curriculum Developer**

*May 2017 - Present*

- Identified structural issues with the Digital System Design II and Interfacing Digital Electronics lab courses
- Designed and developed replacement labs that have students create a simplified MIPS Datapath in VHDL
- Restructured existing lab exercises and wrote new lab procedures for students to implement

*Rochester, NY*

**Dr. Shanchieh Yang Laboratory (RIT) | Research & Development Team**

*April - September 2016*

- Designed and developed a user interface for a Java program to support computing security-related research
- Worked with and debugged an external API used for graph drawing

*Rochester, NY*

## Projects

**MITRE eCTF Competition**

*January - April 2019*

- Third place finish in competition to secure a Zynq System on Chip device and attack opposing teams' designs
- Collaborated with RIT Computing Security team to secure both hardware and software on the device
- Designed a system to reset the software of the device if the hardware detected a possible attack

**Personal Server**

*2016 - Present*

- Built and configured a personal server using multiple distributions of Linux
- Set up the server with a hypervisor for easy management of multiple VMs for different tasks
- Managed multiple users and wrote installation scripts for most commonly used programs

**ImagineRIT MAME Project**

*2015 - 2017*

- Team leader: coordinated work of twelve engineering students to design and build a multiple gaming system emulator
- Developed project specifications and ensured on-budget delivery

## Technical Skills

**Operating Systems** Linux (Arch, Debian, & Red Hat Based), Windows, macOS

**Languages** VHDL, Java, C#, C, Python, VBA, Bash, Assembly (MIPS and ARM ThumbII)

**Hardware** FPGA, SoC, ARM Microprocessors (Raspberry Pi, NXP K64F, STML32), Arduino

**Software** Xilinx Vivado & SDK, Xilinx ISE, Modelsim, Keil  $\mu$ Vision

## Select Leadership Experience and Activities

**RIT Engineering House | Vice President**

*2016 - 2017*

- Executive Board member of an Engineering-focused student organization at RIT
- Responsible for Engineering House internal affairs and RIT liaison tasks
- Assumed role of President for last month of term

*Rochester, NY*

**Eagle Scout and Senior Patrol Leader | Boy Scout Troop 399**

*2015*

- Coordinated service projects and other activities for a troop of thirty younger scouts

*Lansdale, PA*