

# Cody Holliday

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Graduate Student Seeking Internship

## Education

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### Oregon State University

Corvallis, OR

M.S. Computer Science

9/2019–6/2021(exp)

Research on improving SGX+ORAM performance to create an Oblivious Searchable Database and fuzzing Real Time Operating Systems.

### Oregon State University

Corvallis, OR

B.S. Computer Science, cum laude (GPA: 3.52)

9/2014–6/2018

Studied Computer Science with an interest in security and Operating Systems.

Relevant Coursework.....

Systems Security, OSI&II, Analysis of Algorithms, Cyber Attacks and Defense, Senior Design

## Research Projects

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### Oblivious Searchable Database.....

We build on existing designs combining Circuit ORAM with Intel SGX, and improve performance by optimizing key aspects of the implementation to achieve the throughput needed to host a usable searchable database (~20000 requests/second).

### Fuzzing + Symbolic Execution.....

We are doing research that combines Symbolic execution with Fuzzing to reduce time spent on simple failure conditions in System Calls and to improve bug discovery. The research specifically focuses on fuzzing Real Time Operating Systems to ensure isolation between different modules on a board, such as the motherboard in a car.

## Work Experience

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### Faculty Research Assistant

Remote

Oregon State University

9/2018–6/2019

Researching automated testing of Real Time Operating Systems using Open Source Fuzzing and Symbolic Execution software.

### Student Systems Engineer

Corvallis, OR

OSU Open Source Lab

6/2016–6/2018

Gained knowledge of system administration tools and techniques by working with coworkers and mentors to solve problems for clients hosting on our servers. Projects ranged from building components of a testing pipeline to writing tools to migrate data from Open Source project management tools.

### Teacher's Assistant for Intro Computer Science I & II, System Administration

Corvallis, OR

Oregon State University

1st and 4th year

Graded student work and led labs. Helped students understand key Computer Science concepts in the Intro series. Guided students in performing System Administration tasks. Evaluated and provided feedback on new coursework.

## Awards

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### Cyber Defense Competition

Pacific Northwest National Labs

1st Regionally, 4th Nationally

Spring 2018

Defended simulated ICS infrastructure from Attackers. Responsible for auditing existing Linux servers and configuring NTP.

### Cyber Force Competition

Pacific Northwest National Labs

1st Regionally, 4th Nationally

Fall 2019

Defended a simulated High Performance Computing cluster from Attackers. Responsible for auditing, setting up Email stack, configuring NTP and DNS.