

## Sean M. Richardson

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### Education:

- University of California Riverside – 4th year, Expected Graduation Fall 2019
  - B.S. in Computer Science, GPA: 3.16
- Ramona High School – Graduated June 2014, GPA: 4.1

### Experience:

- Undergraduate Researcher (Fall 2018 – Current)
  - Data flow tracking in Linux kernel using compiler instrumentation
  - Binary analysis targeting ARM based router firmware
  - Compiler optimizations for a domain-specific language for programmable biochemistry
- Student Intern, UCR Dean's Office (Summer 2018)
  - Focused on securing IoT devices and public access kiosks
  - Designed custom system administration scripts
  - Configured group policies for work stations

### Projects:

- FPL\_Interpreter – [https://github.com/vastopol/FPL\\_Interpreter](https://github.com/vastopol/FPL_Interpreter)  
An interactive interpreter for a high level functional programming language I designed and built using C++.
- Jmips – <https://github.com/vastopol/Jmips>  
A Mini Java compiler which outputs 32-bit MIPS assembly code. Written in Java using JTB and JavaCC.
- Disco – <https://github.com/vastopol/disco>  
A custom disassembly and binary patching framework for reverse engineering the LC-3 assembly language designed in Python.

### Professional Skills:

- Programming Languages: C++, Python, Java, C, BASH Shell
- Compiler and programming language design and implementation
- Experience with binary analysis, disassembly, and reverse engineering
- Knowledge of computer security and endpoint IoT security concepts

### Activities:

- ACM – The Association for Computing Machinery member
- Cyber@UCR – Cybersecurity Club member, CTF team, CPTC team
- OPLSS – Oregon Programming Language Summer School Fellowship Recipient
- Guardian Scholars Program for Foster Youth – Member and Scholarship Recipient