

Josiah Bills

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<https://github.com/obsgolem>

Education

Bachelors of Science in Computer Science
Minor in Math
Cedarville University

Skills

Selected Programming Languages

C++	C
CMake	C#
Rust	x86/x86-64 ASM
Python	Julia
PHP	Java
Javascript	HTML
CSS	Go
Matlab	Simulink

Selected Technologies

AFSIM	Dakota
Air Force HPC	HDF5
LLVM	Git
OpenGL	SQL

Informally self taught in pure mathematics, especially abstract algebra, category theory, and type theory.

Personal Projects

JL Programming Language

- Designed a fully featured language with inspiration from Rust, Haskell, Julia, Lisp, and C.
- Developed a solution to a complex circular dependency problem
- Developed a full compiler for the language, complete with compile time code execution and code generation with LLVM

Radar Simulator

- Developing an open source toolkit for medium-high fidelity Radar simulation
- Learning about RF physics and signal processing

Experience

Fall 2018-Present

Lead Modeling and Simulation Developer *Radiance Technologies*

- Acted as solutions architect for the Cyber/EW team on AFSIM team-of-teams development effort
- Led a team of software engineers in the development and sustainment of the AFSIM product
- Providing help desk and support for AFSIM users
- Supported AFRL in the creation of a space-based GMTI model in AFSIM
- TS/SCI clearance

Summer 2018

HPC Developer *Applied Research Solutions*

- Implemented methods for doing laser simulations on the Air Force HPC
- Worked with experts at the AFIT Center for Directed Energy to develop models

Fall 2017-Spring 2018

Cedarville University Senior Design Team *Cedarville University*

- Helped to design the payload for an educational remote access trojan
- Designed a framework for loading and unloading exploits
- Implemented privilege escalation exploits
- Advised team on Mac OS X development

Summer 2017

Software Developer Subcontractor *Design Software LLC*

- Designed a preview and export tool for schematics of buildings
- Researched Google Sketchup, Google Layout, and DXF apis.

Spring 2017

Volunteer Software Developer *LightSys Code-a-Thon*

- Worked with a team of programmers to redesign a website in 5 days
- Made use of a LAMP stack