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
GDB & Cppdbg	LSP

Informally self taught in pure mathematics, especially abstract algebra, category theory, and type theory.
Intermediate reading and speaking knowledge of Ancient Greek.

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 various teams on the AFSIM team-of-teams development effort
- Developed a package manager for AFSIM
- Developed a VSCode plugin for AFSIM, including custom parser
- Integrated missile, airframe, and sensor models, including both C++ and Simulink models, into AFSIM
- 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
- Redesigned AFSIM's RF subsystem to make it more physically accurate and allow users to change the fidelity of models in a fine grained manner
- 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