

# 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

### Algebraic Geometry Class

- Taking a free online graduate level course on scheme theory
- Taught by a Stanford Professor

## Experience

*Fall 2018-Present*

### Modeling and Simulation developer *Radiance Technologies*

- Developing and sustaining AFSIM core
- Supporting AFRL in the integration of MATLAB models into the AFSIM framework
- Providing help desk and support for AFSIM users
- Using Dakota by Sandia to perform satellite constellation trade analyses
- 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