Joshua Nelson

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jyn514.github.io | github.com/jyn514 | linkedin.com/in/joshuayn

Education

University of South Carolina, Columbia, SC   May 2021
- Advanced Digital Design (using Verilog)   cse.sc.edu/class/611
- Compiler Construction (using C)   cse.sc.edu/class/531
- Ethical Hacking   cse.sc.edu/class/518

Skills

- Familiar with Python, Rust, Java, C, Bash, JavaScript, SQL
- Knowledge of C++, Haskell, Scheme, x86 Assembly, MIPS
- Technologies: git; make; Travis CI; Linux; SQL Server; Django framework

Experience

Maintainer – Docs.rs   October 2019 - Present
- Created a deploy system used in production by 600,000 users daily
- 2nd-most contributions to docs.rs
- Full member of the rust-lang organization

Software Intern – YottaDB, Malvern, Pennsylvania   December 2019 – Present
- Design Rust API for an existing C codebase
- Work on 100% open-sourced code
- Wrap a single-threaded core with a multi-threaded API

Cyber Security Intern – Cyber Ninjas, Sarasota, FL   May 2019 – July 2019
- Created a Burp Suite plugin which decoded Protobuf messages
- Rewrote a CTF web engine using Azure Functions and JavaScript
- Analyzed existing web applications for common security flaws

Software Intern – McEntire Produce, Columbia, SC   May 2018 – July 2018
- Created a web-based ticketing system for up to 40 simultaneous users
- Designed an SQL Server database of about 1 megabyte for client data
- Integrated authentication with AD using LDAP

Projects

- C compiler, written in Rust: github.com/jyn514/rust-c-compiler
- Web server written in C: github.com/jyn514/threaded-server
- Search tool for GroupMe written in Python: github.com/jyn514/grepme
- Contributed to a Unix shell written in Python: github.com/oilshell/oil

Awards

- **National Merit Scholarship** – top 99.5% on PSAT (awarded from NMSC)
- **Honors Student** – Accepted by University of South Carolina Honors College

Clubs

Association of Computing Machinery (ACM) – *Vice President*   Aug. 2019 – Present

Cyber Security Club – *Chief Technical Officer*   Jan. 2019 – Present