Joshua Nelson

(813) 404 – 5744 | jynelson@email.sc.edu

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

Education

B.S. Computer Science and Mathematics	Expected May 2021
University of South Carolina, Columbia, SC	GPA: 3.86

- 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

- Proficient in Rust, Python, C, Bash, Java, JavaScript, SQL
- Knowledge of C++, Haskell, Scheme, x86 Assembly, MIPS
- Technologies: git, make, docker, cmake, NGINX, Travis CI, Linux, Django framework

Experience

Co-lead of Docs.rs – The Rust Programming Language   Oct. 2019 - Present
- Maintained the docs.rs project and recruited two other team members
- Decreased memory usage when parsing HTML files by a factor of 13
- Created a deploy system used in production by 600,000 users daily

Team Member of Rustdoc – The Rust Programming Language   July 2020 – Present
- Helped stabilize intra-doc links
- Helped make it easier to contribute to the rust compiler
- Worked asynchronously with peers from many different cultures and time zones

Software Developer – YottaDB, Malvern, Pennsylvania   Dec. 2019 – Present
- Designed a Rust API for an existing C codebase
- Implemented various SQL features for Octo, an SQL frontend for the main database
- Improved the continuous integration and deployment systems for various projects

DevOps Engineer – Center for Digital Humanities, Columbia, SC   Aug. 2018 – Dec. 2019
- Deployed and maintained about 12 projects using docker and NGINX
- Migrated websites from a Digital Ocean droplet to Google Cloud without downtime
- Set up continuous deployment for various projects

Software Intern – McEntire Produce, Columbia, SC   May 2018 – July 2018
- Created a web-based ticketing system for up to 40 simultaneous users
- Designed a 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/saltwater
- Web server written in C: github.com/jyn514/threaded-server
- Added support for .bss sections to an ELF file writer: github.com/m4b/faerie
- Fixed read-only relocations for another ELF writer: github.com/gimli-rs/object
- Link-checker for documentation: github.com/deadlinks/cargo-deadlinks
- Contributed to a Unix shell written in Python: github.com/oilshell/oil
- Contributed to LOL HTML, a streaming HTML parser written in Rust
- Wrote a search tool for GroupMe: github.com/jyn514/GrepMe

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
Tau Beta Pi Engineering Honor Society – *Member*   Aug. 2019 – Present
Cyber Security Club – *Chief Technical Officer*   Jan. 2019 – May 2020