

Joshua Nelson

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Education

University of South Carolina, Columbia, SC

B. S. Computer Science with Honors, 3.8 GPA

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, Java, Rust, C, Bash, SQL, JavaScript
- Knowledge of C++, Haskell, Scheme, x86 Assembly, MIPS
- Technologies: git; make; Travis CI; Linux; SQL Server; Django framework; HTML and CSS
- Fluent in French, proficient in Spanish

Experience

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

Teaching Assistant – University of South Carolina, Columbia, SC

Jan. 2018 – Present

- Help classrooms of 25 students learn UNIX, git, and make
- Compile further resources in a git repository
- Hold office hours weekly

Research Assistant – University of South Carolina, Columbia, SC

Nov. 2017 – May 2018

- Create Convolutional Neural Network with 3 deep layers to classify proteins
- Use Machine Learning to predict new proteins as antimicrobial with 95% accuracy

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*

Aug. 2018 – Present