Nathaniel M. Wilson Computer Science M.S. Candidate, University of San Francisco

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Languages

Java: advanced; C: advanced/intermediate; Python: intermediate; HTML/CSS: familiar; x86: familiar; ARMv4: familiar

Projects (links given for projects hosted on public repositories)

- + BitTorrent Client, written in Java.
- + Zero Hop DHT Distributed File System, written in Java.
- + Fault Tolerant, Strongly Consistent Data Replication Service, built with Spring, written in Java. [demo video]
- + Microservice Ticket Purchase Application, built with Spring, written in Java.
- + <u>Distributed Chat Server</u>, implementing UDP, written in Java.
- + ARMv4 Assembly Language Emulator, with interactive execution mode, written in C.
- + <u>Unix Shell</u>, with input and output redirection functionality, written in C.
- + Heap Manager module, including implementations of malloc() and free(), written in C.
- + Reentrant Read/Write Lock module, to manage concurrent data processing, written in Java.
- + Autocomplete module, written in Java.
- + Burrows-Wheeler compression module, compatible with any unix file, written in Java.
- + TripAdvisor style website, written in Java, with SQL backend, and front end built with Bootstrap and Velocity.

Education

University of San Francisco, San Francisco, CA, Master of Science in Computer Science

2017-2019

- + <u>GPA:</u> 4.0
- + Scholarship: MSCS Merit Scholarship
- + <u>Coursework:</u> Data Visualization; Distributed Software Development; Big Data; Principles of Software Development; Systems Foundations; Algorithms; Master's Project
- + TA Position: Algorithms

Princeton University, Princeton, NJ, Non-degree courses taken while working

2015 - 2016

+ <u>Coursework</u>: Introduction to Computer Science; Linear Algebra; Algorithms and Data Structures; Introduction to Programming Systems

Colorado College, Colorado Springs, CO, Bachelor in Neuroscience

2009 - 2013

Experience

DevOps Software Engineer Intern, Optimizely, San Francisco, CA

06/18 - 09/18

- + Built flaky test dashboard, which ingested, analyzed, and visualized company-wide test data.
- + Created an Al phrase recommender feature for the company website. Won 2nd place in Hack Week.

Research Assistant, Neuroscience of Cognitive Control Lab, Princeton University, NJ

06/16 - 05/17

- + Developed a library of network visualization functions for a cognitive modelling python package.
- + Configured and maintained CI/CD pipeline for the small software team.

Data Curator, Princeton Neuroscience Inst. - Intel Labs Collaboration, Princeton University, NJ

01/15 - 05/17

- + Built and maintained a large linux based repository of fMRI datasets generated by researchers, for use in algorithm development by collaborating Intel engineers.
- + Automated file anonymization, dataset restructuring, file conversion, and data transfer using bash, Python, and Matlab scripts.

Lab Manager, Turk-Browne Cognitive Neuroscience Lab, Princeton University, NJ

06/14 - 09/15

- + Designed, built and conducted experiments investigating interactions between memory and sleep.
- + Worked with a small team to develop the premier infant cognitive neuroimaging research program.
- + Built, maintained, and updated lab and conference websites using Wordpress.