Noah Nelson

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Caltech
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Home
1044 Bryan Ave
Salt Lake City, UT
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Education

California Institute of Technology, Pasadena, CA — Expected BS in Computer Science — 4.0 *2018*

Teaching assistant - Intro to computer science, 2015-2017. Programming for biological science, 2016. Intro to CS theory, 2017. Intro to computer systems, 2017.
Bloomberg Caltech CodeCon 1st place, 2016. CS 1 Honor roll champion, 2014.

Relevant Courses:

Operating Systems, Algorithms and Data Structures, Databases, Languages (C, C++, OCaml, Haskell, Python), Discrete Math and Graph Theory, Computation and Complexity Theory, Calculus, Linear Algebra, Economics.

Skills

Programming languages: Python, C (expert), Swift, JavaScript (strong), C++, Haskell, OCaml, Rust (familiar).
Strong knowledge of operating systems concepts, algorithms, theory, and discrete math.
Experienced with Linux command line tools, MySQL, Git, HTML/CSS.

Projects

CS 124 - Operating Systems *2017*

- Designed and implemented major components of an instructional Unix-like operating system in C
- Worked on a team of three on projects such as kernel threading, virtual memory, synchronized file system
- Achieved highest possible marks on functionality as well as coding style

CS 11 Swift/iOS Track *2017-Present*

- Design, develop, and teach a new iOS app development course at Caltech

Open Source *2015-Present*

- Pipes - Acoustic fingerprinting - implemented acoustic fingerprinting and signal processing algorithms for song matching in C - Created a server backend using Linux, MySQL, and Python
- Papaya - Graph library for Swift - implemented graph data structures and algorithms

Experience

Bloomberg LP, New York NY *2017*

Software Engineering Intern

- Worked with graph database and knowledge base technologies
- Created new visualization tools for entity-relationship data

California Institute of Technology, Pasadena CA *2016*

Summer Undergraduate Research Fellow

- Created new parallel algorithms for the graph matching problem
- Researched various classes of graphs and matching algorithms for expanders and sparse graphs
- Presented a talk on summer research and wrote a research paper

HHMI Janelia Research Campus, Ashburn VA *2015*

Janelia Undergraduate Scholar

- Contributed code to large, organization-wide scientific software projects
- Built tools in Python and JavaScript for tree traversal and graph visualization in large scientific data sets
- Presented a talk and poster on summer research