NATHAN TARRH

SOFTWARE DEVELOPMENT & RESEARCH

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Education

Tufts University
May 2014 (expected)

Bachelor of Science in Computer Science
GPA: 3.50

Selected CS coursework: Algorithms, Data Structures, Machine Structure & Assembly Language Programming, Programming Languages, Advanced Functional Programming, Operating Systems

Selected other coursework: Advanced Electronic and Digital Media, Entrepreneurial Leadership, Experimental Film: Aesthetics and Production, Postmodernism and Film, Technological Tools for Learning

Experience

Tufts Center for Engineering Education and Outreach
May 2011—present

Research and Teaching Assistant
Medford, MA

Developing BlockyTalky, a platform for networked, tangible creations using the Raspberry Pi and Google's Blockly programming editor, at the Lab for Playful Computation.

Designed and devloped curricula and workshops for engineering education in elementary schools under the Integrating Engineering and Literacy grant.

Harvey Mudd College
June 2013—August 2013

Research Assistant
Claremont, CA

Implemented context-free grammar parsing (CYK algorithm) to create higher-order roadmaps for jazz chord progressions under the Intelligent Music Software grant (NSF REU).

Optimized algorithmic matching for music with 100-150% speedup.

WMFO Medford — 91.5 FM
February 2012—May 2013

Software Development
Medford, MA

Developed web scraper to find lyrics and flag explicit tracks (digital catalog of ~250 thousand songs), using Python and the Beautiful Soup library.

Created taste profiler using playlist history and the Echo Nest API to recommend radio shows to listeners.

Administered servers for catalog, station wiki, and public website.

Projects

Park Surfing

Couch surfing for parking spaces. A Node.js app that allows users to list and rent their driveways and sidewalks for cash.

PetOwnerFinder

Matches a tumblr blog and a pet with another simliar blog based on tag similarity. Created with Node.js at MIT's Comedy Hack Day.

Taste Profiler

Profiles radio shows using their playlist history and matches them with compatible listeners. Written in Python and JavaScript.

Technical

Languages:	C/C++	Python
	Java	JavaScript
Frameworks:	Node.js/Express	Flask
Other:	*nix toolkit	Git/SVN