

BROOK E. NICHOLS

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EDUCATION

Tufts University
B.S. Mechanical Engineering May 2015
Secondary focus: Computer Science

WORK EXPERIENCE

Tufts University Center for Engineering Education Research 5/13-8/13, 6/14-8/14
Staff Member/TA/Web developer
Web development for IEL websites. Helped instruct k-12 engineering education programs/camps.
Worked with Google project Pencilcode.net, a web-based coding tutorial site and educational project.
Teleos Therapeutics 6/14 - 9/14
Engineering Intern
Calibrated and implemented sensors in a research lab environment. Interfaced Arduino with Matlab code.
Prototyped experimental testing wells via 3-d modeling/printing.
Tufts TTS Academic Technology Fellows Program 8/13 - 5/14
AT Fellow
Coded/debugged web tool projects and websites for professors. Also managed website content/design, files, and used other web tools.

RELEVANT COURSEWORK / EXPERIENCE

Tufts University Mechanical Engineering Courses
Advanced Digital Controls and Dynamic Systems, Robotics, GPS & Satellite Navigation(Spring 2015)
Tufts University Computer Science Courses
Data Structures, Web Programming, Computer Assisted Design, Web Engineering(Spring 2015)
Tufts Fall Hackathon 2013, 2014 First Place Winner, Second Place Winner
Built Web-game using Echonest API, Javascript/canvas.(2013)
Built 3D data visualization Web App, using Echonest API, Javascript, Threejs, Bootstrap, and Parse. (2014)
Trinity College Firefighting Robot Contest 2014Smallest Robot Award, 1st place Olympiad, 13th In Contest
Built and programmed room navigating, fire-extinguishing, and autonomous robot with Tufts Robotics team.
Tufts M.E. Senior Design Project
Started with challenge/ objective, drafted a business plan, designed/ built a prototype with various materials, collected data, created a website, and modelled/ animated 3-d future prototype using Blender and Threejs.
Tufts Robotics Design Challenge
Built Fondue serving robot as part of class challenge. Programmed in LabVIEW. Used NI Dashboard iPad App to build/ program a menu to connect, and order food from other robots over wireless network.
Tufts Undergraduate Research (Current)
Working with Lego EV3, and Linux development platform ev3dev, to connect robot functionality with the web.

TECHNICAL SKILLS

Programming Languages
C++, UNIX, VBA/Excel programming, HTML/CSS, Javascript/Ajax/jQuery/Node.js, PHP
Software
AutoCAD/Inventor, SolidWorks, MatLab, LabView, Blender, Github, Wordpress, Arduino IDE
Mechanical Skills
Machining, Welding, Lathe, Powersaw/Drill, Milling, 3-d printing, Laser-cutting, Soldering

MEMBERSHIPS

Tufts Robotics Team FIRST Robotics Team#1493 Tufts Engineering Mentors Habitat for Humanity
Tufts Engineering Mentors Habitat for Humanity Tufts Symphony Orchestra Tufts Gamelan Laras Tantrem