Thomas Donahue

donahut.github.io
redacted for web
donahut.se@gmail.com
github.com/donahut

Experience

Mar 2014 – **Robot Software Engineer**, *Aldebaran Robotics*, Boston, MA
Member of a small agile team, as well as apart of a larger multinational team with others headquartered in Paris and Shanghai. *Select accomplishments:* Designed and built autonomous office companion/receptionist (regularly demoed for external clients). Developed and implemented touch sequence gesture extraction algorithm and devised API to allow for future extensibility. Generated dynamic natural language dialogs by combining external knowledge bases, knowledge extracted from interactions over time and bootstrapped knowledge.

Keywords: Python, Robotics, HRI, NLP/NLG, JS, HTML/CSS, C++, Scrum, Linux, Git

2012 - 2014 **Research Assistant**, *Human Robot Interaction Lab*, *Tufts University*, Medford, MA
Implemented distributed notification system for the ADE robotics middleware. Overhauled system GUIs for ADE middleware with improved efficiency and speed, as well as a simplified UX. Developed data-mining tools for rich audio and video corpora and annotations. Designed and built web-survey platform for multiple HRI studies. Designed, conducted and analyzed multiple HRI studies investigating multiple factors within human-robot teams.

Keywords: Java, Robotics, HRI, NLP/NLG, PHP, JS, HTML/CSS, Linux, Git, SVN, LaTeX, R

2012, 2013 **Teaching Assistant**, *Computer Science Dept.*, *Tufts University*, Medford, MA
Maintained automated testing suite and grading system used by dozens of teaching assistants for introductory C++ course. Provided instruction to students during lab sections as well as office hours. Graded homework and exams.

Keywords: C++, Shell scripting, Linux

2010 - 2012 **Research Assistant**, *Computer-Human Interaction Lab*, *Bowling Green State University*, Bowling Green, OH
Part of a team that developed a novel, tangible password input system. Designed, built and tested an alternative UI for World of Warcraft for the visually impaired community. Helped build a series of web-tools for use in undergraduate Geology courses. Investigated the learning benefits of and trade-offs between mouse, touch and tangible input systems via novel deduction puzzle/game.

Keywords: Java, C++, HCI, Tangible/Touch UIs, Accessibility, Windows

2008 - 2010 **Research Assistant**, *Rhythm, Attention and Perception Lab*, *Bowling Green State University*, Bowling Green, OH
Independently designed and built neural-network in MATLAB that modeled human auditory tone categorization.

Technical Skills

Languages

Core: Java, Python, C++
Experienced: JS, Clojure, PHP, HTML/CSS, R
Exposure: C, SQL, Scheme, SML, Prolog, MATLAB, CUDA

Tools

src Control: Git, Subversion
Build: Ant, Leiningen
Editors: Emacs, IntelliJ IDEA, Visual Studio
Writing: LaTeX, Org-mode

Platforms

Linux: Preferred OS. Considerable Linux development experience, and comfortable at the command line shell
Robotics: Extensive experience working with Aldebaran's NaoQi robotics middleware, as well as ADE – a research focused distributed, multi-agent robotics middleware. Familiar with ROS.

Education

2012 - 2014 **Graduate studies in Computer Science**, *Tufts University, Medford, MA*
Withdrew in good standing from Computer Science & Cognitive Science Joint-Ph.D. program

2011 - 2012 **M.S. in Computer Science**, *Bowling Green State University, Bowling Green, OH*

2007 - 2011 **B.S. in Computer Science & Psychology**, *Bowling Green State University, Bowling Green, OH*
Minor in Mathematics, Cum Laude

Publications

2014 Cody Canning, **Thomas Donahue**, Matthias Scheutz. *Investigating Human Perceptions of Robot Capabilities in Remote Human-Robot Team Tasks based on First-Person Robot Video Feeds.* 2014 International Conference on Intelligent Robots and Systems (IROS)

2013 **Thomas Donahue**, G. Michael Poor, Martez Mott, et. al. *On Interface Closeness and Problem Solving* 2013 Conference on Tangible, Embedded and Embodied Interaction (TEI)

2012 Martez Mott, **Thomas Donahue**, G. Michael Poor, et. al. *Leveraging Motor Learning for a Tangible Password System* 2012 Conference on Human Factors in Computing Systems: Extended Abstracts (CHI)

2011 G. Michael Poor, **Thomas Donahue**, Martez Mott, et. al. *Access-a-WoW: Building an Enhanced World of Warcraft UI for Persons with Low Visual Acuity* 2011 International Conference on Universal Access in Human-Computer Interaction (UAHCI)

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