





Thomas Donahue

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Experience

- April 2016 – **Character AI Engineer**, *Jibo*, Boston, MA
Mission: Plan and implement many aspects of Jibo that make him feel lifelike, produce dynamic behavior, and behave in a manner that is consistent with his character.
Keywords: JS/TypeScript, NodeJS, Electron, HRI, OSX, Scrum
- 2014 – 2016 **Robot Software Engineer**, *Softbank Robotics (Aldebaran)*, Boston, MA
Member of a small agile team working across the Aldebaran stack – from NaoQi middleware modules to core applications.
 - Part of the team that designed and built the core application launching and dialog interaction for all Aldebaran robots.
 - Designed and built *Act* framework for semi-autonomous multi-robot–human interactions.
 - Developed *ALTactileGesture*, a high-level touch sequence gesture recognition module.
 - Released *Mad Chats*, an interactive Mad Libs-esque word game played between human and robot.
 - Designed, built and regularly demoed semi-autonomous robot greeter for range of external clients.**Keywords:** Python, JS, C++, HTML/CSS, HRI, Linux, Scrum
- 2012 – 2014 **Research and Teaching Assistant**, *Human Robot Interaction Lab*, Tufts University, Medford, MA
Areas of focus: human-robot teaming, situated natural language understanding and generation.
As research assistant:
 - Implemented distributed notification system for the ADE robotics middleware.
 - Overhauled system GUIs for ADE middleware – yielding improved stability, efficiency and a simplified UI.
 - 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.**As teaching assistant:**
 - 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:** Java, Clojure, C++, JS, HTML/CSS, PHP, HRI, NLP, Linux, Git, SVN, \LaTeX , R
- 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.
 - Investigated the learning benefits of – and trade-offs between – mouse, touch and tangible input systems via a novel deduction puzzle/ game.
 - Helped build a series of web-tools for use in undergraduate Geology courses.**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: Python, C++, Java
Proficient: JS, HTML/CSS, Clojure, R, PHP

Tools

src Control: Git, Subversion, Gerrit
Writing: \LaTeX , Org-mode

Platforms

Linux: Considerable Linux development experience and comfortable with command line interfaces.
Robotics: Extensive development experience with both Aldebaran's NaoQi robotics middleware, as well as ADE – a research focused distributed, multi-agent robotics middleware.

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

2015 **Thomas Donahue**, Matthias Scheutz.
Investigating the Effects of Robot Affect and Embodiment on Attention and Natural Language of Human Teammates.
2015 International Conference on Cognitive Infocommunications (CogInfoComm)

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)