

# NICK WALKER

Ph.D. Student in Computer Science

nswalker@cs.uw.edu

nickwalker.us

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## EDUCATION

- 2018–        **The University of Washington**, Seattle, WA.
- Ph.D. Computer Science
- 2014–2018    **The University of Texas**, Austin, TX.
- B.S.A. Computer Science Honors
  - Polymathic Scholar (Interdisciplinary Honors)
  - Certificate in Digital Arts & Media
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## JOURNAL ARTICLES

- In prep.        J. Thomason, A. Padmakumar, J. Sinapov, N. Walker, Y. Jiang, H. Yedidsion, J. Hart, P. Stone, R. Mooney. Jointly Improving Parsing and Perception for Natural Language Commands through Human-Robot Dialog. *Journal of Artificial Intelligence Research (JAIR)*.
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## REFEREED CONFERENCE

- [1]            J. Hart, R. Shah, S. Kirmani, N. Walker, K. Baldauf, N. John, P. Stone. PRISM: Pose Registration for Integrated Semantic Mapping. In *Proc. IEEE/RSJ Int. Conf. Intelligent Robots and Systems (IROS)*. Madrid, July 2018
- [2]            M. Svetlick, M. Leonetti, J. Sinapov, R. Shah, N. Walker, P. Stone. Automatic Curriculum Graph Generation for Reinforcement Learning Agents. In *Proc. 31st AAAI Conf. Artificial Intelligence*. San Francisco, February 2017
- [3]            E. Schroeder, N. Walker, A. Danko. Wearable Ear EEG for Brain Interfacing. In *Proc. SPIE Neural Imaging Sensing*. San Francisco, February 2017
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## REFEREED WORKSHOP, SYMPOSIUM

- [4]            Y. Jiang\*, N. Walker\*, M. Kim, N. Brissonneau, D. S. Brown, J. W. Hart, S. Niekum, L. Sentis and P. Stone. LAAIR: A Layered Architecture for Autonomous Interactive Robots. In *AAAI Fall Symposium on Reasoning and Learning in Real World Systems for Long-term Autonomy*. Arlington, October 2018
- [5]            J. W. Hart, H. Yedidsion, Y. Jiang, N. Walker, R. Shah, J. Thomason, A. Padmakumar, R. Fernandez, J. Sinapov, R. Mooney and P. Stone. Interaction and Autonomy in RoboCup@Home and Building-Wide Intelligence. In *AAAI Fall Symposium on Interactive Learning in Artificial Intelligence for Human-Robot Interaction*. Arlington, October 2018
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## PRESENTATIONS

- 2018        Longhorn Poster Session, UT Austin. An Interaction Perspective on Robot Learning for Domestic Service Robots. N. Walker. Poster.
- 2018        Bridging Disciplines Program Poster Session, UT Austin. Exploring New Workflows for Generative Art. N. Walker. Poster.
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- 2018 Undergraduate Research Forum, UT Austin. Creating Shared Representations for Inter-robot Transfer Learning. N. Walker, R. Shah. Poster.
- 2017 Undergraduate Research Forum, UT Austin. Automatic Curriculum Graph Generation for Reinforcement Learning Agents. N. Walker, R. Shah. Poster.
- 2017 AAAI 2017, San Francisco. Automatic Curriculum Graph Generation for Reinforcement Learning Agents. N. Walker, R. Shah. Oral Spotlight, Poster.
- 2016 Fall Undergraduate Research Symposium, UT Austin. Automatic Curriculum Graph Generation for Reinforcement Learning Agents. R. Shah, N. Walker. Oral Presentation.

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## RECOGNITION

- 2018 Best Poster for DSPL with UT Austin Villa – *RoboCup@Home DSPL*
- 2018-19 Computer Science & Engineering Research Fellowship – *Allen School, UW*
- 2018 GRFP Honorable Mention – *National Science Foundation*
- 2018 Dean’s Honored Graduate – *College of Natural Sciences, UT*
- 2018 Outstanding Undergraduate Researcher Award Honorable Mention  
*Computing Research Association*
- 2017-18 Undergraduate Research Fellowship – *Office of Undergraduate Research, UT*
- 2017-18 Angus G. and Erna Pearson Endowed Undergraduate Scholarship – *Dept. of CS, UT*
- 2017 FRI Travel Grant – *Freshman Research Initiative, UT*
- 2017 TIDES Fellowship – *Texas Institute for Discovery Education in Science, UT*
- 2016-18 College Scholar - *College of Natural Sciences, UT*
- 2014-18 University Honors (GPA Honors) - *UT Austin*
- 2014-18 College of Natural Sciences Scholarship – *College of Natural Sciences, UT*

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## RESEARCH COMPETITIONS

- 2017 3rd Place, RoboCup@Home DSPL, UT Austin Villa@Home – *RoboCup Federation*

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## RESEARCH AFFILIATIONS

- 2018– **Human-Centered Robotics Lab** - University of Washington  
PI: Maya Cakmak
- 2017-18 **UT Austin Villa@Home** - University of Texas at Austin  
PIs: P. Stone, L. Sentis, S. Niekum, A. Thomaz, R. Mooney. Supervisor: Justin Hart
- 2015-18 **Building Wide Intelligence Project** - UT AI Lab  
PI: Peter Stone. Supervisors: Matteo Leonetti, Jivko Sinapov, Justin Hart

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## OUTREACH

- 2018 **UTCS Robotics Camp** – Program Assistant
- Helped high school students assemble robot kit, program intelligent behaviors
- 2017, 2018 **Explore UT** – Lab Demo Assistant
- Ran demos on our robots and explained BWI’s research to community members

- 2017 **UT Introduce a Girl to Engineering Day** – Women in ECE Workshop Assistant
- Taught grade school girls about electricity using Play-Doh and LEDs
- 2016, 2017 **UT Computer Science, Code Longhorn & First Bytes** – Web Workshop Instructor
- Taught high school students from underrepresented groups about web technologies
- 2016–18 **Freshman Research Initiative** – Peer Mentor
- Helped first- and second-year students formulate their research projects
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## WORK EXPERIENCE

Summer 2016 **USAA** – Research Engineer Intern

- Developed experimental brain-computer interface software and hardware
- Work contributed to a SPIE conference publication






Summer 2015 **USAA** – Research Engineer Intern

- Characterized the performance of automated speech transcription vendors
  - Developed evaluation methodology that led to a **patent application**
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## SKILLS

- Experience with robotics software (**ROS, C++, Python**)
  - Experience with robotics platforms (**HSR, BWIArmBot**)
  - Experienced with iOS development (**Swift**)
  - Proficient in embedded development (**C, C++**)
  - Proficient with web technologies (**PHP, Typescript, HTML, CSS**)
  - Handy with creative tasks in Photoshop, Illustrator, InDesign, Premiere
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## PERSONAL

-  [nickwalker.us](http://nickwalker.us)
-  [github.com/nickswalker](https://github.com/nickswalker)
-  [twitter.com/nickwalker\\_us](https://twitter.com/nickwalker_us)
-  [flickr.com/photos/nickwalker-us/](https://www.flickr.com/photos/nickwalker-us/)
-  [linkedin.com/in/niwalker](https://www.linkedin.com/in/niwalker)

Interests: Classical violin, photography, fencing (foil, USAFA B2012), type design