NICK WALKER

B.S.A. Computer Science, May 2018

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Education

May 2018 **The University of Texas at Austin** GPA: 3.9, Major: 3.86

- B.S.A., Honors in Computer Science
  - Relevant course work: Reinforcement Learning, Artificial Intelligence, Autonomous Intelligent Robotics I & II, Computer Vision Honors, Computational Linguistics, Embedded Systems, Technology Policy Honors
- *Polymathic Scholar* (Interdisciplinary Honors)
  - Thesis field title: *Information, Interfaces and Friction*
- Bridging Disciplines certificate in **Digital Arts and Media**
  - Relevant courses: Computer Graphics, Creative Coding, 3D Production
- Minor in **Human-Computer Interaction**
  - Relevant courses: User Research, Information Studies

Publications

2017 **Automatic Curriculum Graph Generation for Reinforcement Learning Agents**

M. Svetlick, M. Leonetti, J. Sinapov, R. Shah, N. Walker, P. Stone. In *Proceedings of the 31st AAAI Conference on Artificial Intelligence*. San Francisco, February 2017

- Contributed empirical evaluations, experiments, writing, and feedback on the core algorithm

2017 **Wearable Ear EEG for Brain Interfacing and Monitoring**

E. Schroeder, N. Walker, A. Danko. In *Proceedings of SPIE.* San Francisco, February 2017

- Contributed empirical evaluations, experiment design, embedded software, experimental software

Posters

2017 **Automatic Curriculum Graph Generation for Reinforcement Learning Agents**

M. Svetlick, M. Leonetti, J. Sinapov, R. Shah, N. Walker, P. Stone. *The 31st AAAI Conference on Artificial Intelligence (AAAI-17).* San Francisco, February 2017

- Co-presented with Rishi Shah

Research Affiliations

2015– **UT Austin – Building Wide Intelligence Project**

PI: Peter Stone. Supervisors: Matteo Leonetti, Jivko Sinapov

Current Projects

Reinforcement learning agents for energy-efficient arm control

- Evaluating policy gradient approaches for learning efficient motor control
- Investigating usecases on Segbot service robots with Kinova Mico arm

Reinforcement learning agents music composition

- Evaluating agents for two-part counterpoint composition
- Possible applications in automatic composition tools, content generation

Work Experience

Summer 2016 **USAA** – Research Engineer Intern
- Developed experimental brain computer interface software and hardware
- Work contributed to SPIE conference publication

2015– **Freshman Research Initiative** – Peer Mentor
- Helped students in the Autonomous Intelligent Robotics stream with classwork
- Familiarized students with the Building Wide Intelligence Segbot platform
- Helped new mentors interested in reinforcement learning begin their research

Summer 2015 **USAA** – Research Engineer Intern
- Developed experimental brain computer interface software and hardware
- Evaluated natural language software vendors to inform large business decision
- Coinventor on two provisional patent applications

Skills

- Research experience with robotics and AI **(ROS, reinforcement learning)**
- Experienced with **Python** and **Java**
- Experienced with iOS development **(Swift)**
- Proficient in embedded development **(C, C++)**
- Exposure to web technologies **(Typescript, SCSS, HTML)**

Recognition

2017 Focus Scholar – Georgia Tech
2016 College Scholar - College of Natural Sciences
2015– University Honors List (2 semesters) - UT Austin
2014– College of Natural Sciences Scholarship
2014– Dr. Charles and Mary Love Bailey Scholarship - Texas Exes
2014– Hispanic Faculty/Staff Association Scholarship - Texas Exes
2014 Best Grant Proposal - Honors research methods class (size 150+)

Leadership

2015– **Mobile Application Development (student organization)** – Labs Director
- Lead teams of student developers working on pro-bono projects
- Shipped major updates to the CS department's app
- Lead teams to develop apps for MADcon, a free developer conference

2015 **Mobile Application Development (student organization)** – iOS Instructor
- Taught introductory iOS development workshops on a weekly basis

Social Media

linkedin.com/in/niwalker github.com/nickswalker

Interests

- Classical violin
- Interactive machine learning
- Photography
- String quartets
- Type design
- Fencing