

David Millard

<https://dmillard.github.io>

Ph.D. Student
Robotics Embedded Systems Lab
Computer Science Department
University of Southern California

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Education

University of Southern California Los Angeles, California Ph.D. Student, Department of Computer Science Advised by Gaurav Sukhatme	August 2018 - May 2023 (expected) GPA 4.00/4.00
University of Georgia Athens, Georgia Bachelor of Science, double major in Math and Computer Science	August 2010 - May 2014 GPA 3.94/4.00
University of Oxford Oxford, England International Conflict course	May 2011 - June 2011

Work experience

X (formerly Google X) Mountain View, California Software Engineer, Robotics Built perception systems for mobile base navigation Designed and developed sequence learning models for dynamic obstacle prediction and avoidance	December 2015 - June 2018
Microsoft Corporation Redmond, Washington Software Development Engineer, Windows 10 Photos Developed photo viewer application served to millions of customers (C#/C++)	July 2014 - November 2015

Awards

NASA Space Technology Research Fellowship Four-year graduate fellowship, awarded for NSTRF proposal *Interpretable Predictive Planning for Human-Robot Teams*

Computer Science Outstanding Undergraduate with Distinction University of Georgia. Awarded to the best student in the Computer Science department.

Foundation Fellowship The University of Georgia's top academic undergraduate four-year scholarship.

Robert C. Byrd Honors Scholarship Federal four-year merit scholarship for undergraduates.

Publications

- Heiden, Eric, David Millard, and Gaurav S Sukhatme (2019). “Real2Sim Transfer using Differentiable Physics”. In: URL: <https://sim2real.github.io/assets/papers/heiden.pdf>.
- Heiden, Eric, David Millard, Hejia Zhang, et al. (2019). “Interactive Differentiable Simulation”. In: *arXiv:1905.10706 [cs, stat]*. arXiv: 1905.10706. URL: <http://arxiv.org/abs/1905.10706> (visited on 07/12/2019).

Research experience

- Robotics Embedded Systems Lab** University of Southern California August 2018 -
Graduate Research Assistant
- Cognitive Learning for Vision and Robotics Lab** University of Southern California August 2018 -
Graduate Research Assistant
- THINC Lab** University of Georgia January 2013 - June 2014
Undergraduate Research Assistant
Implemented a framework using ROS to run multi-agent decision making algorithms on quadrotors.
Developed approximation algorithms for Interactive Partially Observable Markov Decision Processes.
- Schindelhauer Lab** University of Freiburg May 2012 - July 2012
Visitor
Developed and implemented models for sonic localization of robot swarms or mapping applications.
- Schools Improvement Initiative** University of Cape Town June 2013 - August 2013
Visitor
Collected data on community outreach strategies and technological education curricula.
Repaired hardware, trained teachers, and installed software and wikis at schools with limited resources.
- Promislow Lab** University of Georgia July 2011 - January 2013
Undergraduate Research Assistant
Developed computational models backing a new hypothesis for post-reproductive organism lifespan.

Leadership

- Greyhills Academy Robotics Pilot** Tuba City, Navajo Nation, Arizona April 2018
With another Googler, organized and taught a two day robotics pilot course for students living in the Navajo nation.
Developed a continuing partnership between Google and Greyhills academy, and set the schedule for future collaboration.
- UGA Mathcounts Outreach** University of Georgia August 2013 - May 2014
President
Coordinated board meetings and set organizational direction for a 200+ member student volunteer tutoring organization.
Expanded reach from 8 to 11 middle schools and increased focus on students in need.
Volunteer Coordinator August 2012 - May 2013
Coordinated 200+ student volunteers at 8 local middle schools, distributing curriculum materials and establishing contact with school administrations.
- Free IT Athens** Athens, Georgia August 2009 - May 2014
Staff Member
Trained volunteers in building computers and interacting with customers.
Taught classes in basic computer use to low-income Athens residents.