

DANIEL ROY MILLER

www.danielroymiller.com

EDUCATION

- Stanford University**
- Ph.D. Candidate Electrical Engineering, expected graduation 2018
 - M.S. Electrical Engineering, June 2016 — GPA: 3.92

Selected Coursework

NLP & Deep Learning (CS 224N) · Artificial Intelligence (CS 221) · Machine Learning (CS 229) · Modern Applied Statistics Series (STATS 315a/b) · Convex Optimization (EE 364A) · Linear Programming (MS&E 310)

- Texas A&M University**
- B.S. Electrical Engineering, Spring 2014 — GPA: 4.0
 - B.S. Applied Mathematical Science, Spring 2014 — GPA: 4.0

SELECT PUBLICATIONS

Scalable Data Center Power Management via a Global Stress Signal. Miller, D., Masters, N., Zhou, Z. and Bambos, N.. *IEEE Global Communications Conference (GLOBECOM)*. 2015

Improving Predictions of Pediatric Surgical Durations with Supervised Learning. Master, N., Zhou, Z., Miller, D., Scheinker, D., Bambos, N. and Glynn, P.. *International Journal of Data Science and Analytics*. 2017

Dynamic Control of Data Center Network and Computation Resources. Miller, D., Xia, L., Zhou, Z. and Bambos, N.. *International Conference on Computing, Networking and Communications (ICNC)*. 2017

Service Rate Control of Tandem Queues with Power Constraints. Xia, L., Miller, D., Zhou, Z. and Bambos, N.. *IEEE Transactions on Automatic Control (TAC)*. 2017

A Practical Approach to Machine Learning for Clinical Decision Support. Miller, D., Scheinker, D. and Bambos, N.. *International Conference on Health Care Systems Engineering (HCSE)*. 2017

Sensing-Constrained Power Control in Digital Health. Miller, D., Zhou, Z. Bambos, N and Ben-Gal, I.. *to appear in American Control Conference (ACC)*. 2018

Optimal Sensing for Patient Health Monitoring. Miller, D., Zhou, Z. Bambos, N and Ben-Gal, I.. *to appear in IEEE International Conference on Communications (ICC)*. 2018

RELEVANT WORK AND RESEARCH HISTORY

Lucille Packard Childrens Hospital Research Assistant (2016-2017)

- Supported development of a critical care pathway for congestive heart failure patients.
- Used data analytics and machine learning to support care providers by automating tasks.
- Developed tools for examining medication administration records on a patient, physician, or department level.

Texas A&M Undergraduate Thesis Solar Water Heating — Advisor: Dr. Jean Marie Linhart (2015)

- Designed a mathematical model of a solar water heater and developed an optimized control scheme.
- Designed, fabricated, and implemented a system control and data logging circuit board.
- Performed statistical analysis and simulation for further optimization and system behavior prediction.

Silicon Laboratories - MCU & Wireless Applications Electrical Engineering Intern (Summer 2014)

- Wrote a firmware library for 8-bit C8051 microcontrollers to interface with host virtual serial ports over USB
- Designed a USB Switchboard for automated connect and power control of multiple devices under test.

MIT Lincoln Laboratory: Cyber Systems and Operations Electrical Engineering Intern (Summer 2013)

- Wrote and implemented control modules for ROS Robot Operating System in Python, C++, XML, and Bash. Implemented Simultaneous Localization and Mapping (SLAM) and autonomous path-planning protocols.
- Developed an autonomous platform for testing wireless geolocation techniques with a software-defined radio.

Silicon Laboratories - Microcontroller Applications Electrical Engineering Intern (Summer 2012)

- Developed a webcam-based remote demonstration application for showing sleep-mode performance.
- Developed low-power firmware examples for the ARM Cortex M3 based SiM3L1xx line of microcontrollers.

Ascendant Engineering Solutions Electrical Engineering Intern (Summer 2011)

- Designed and fabricated a control system for hexapod robotic platform. Custom MCU and CPLD firmware.

TECHNICAL SKILLS

- Programming: Python, R, Embedded C, MATLAB · TensorFlow, PyTorch
- Machine Learning: Statistical Learning, Deep Learning, Natural Language Processing
- Applied Maths.: Monte Carlo Sim., POMDPs, Linear/Convex Optimization, Dynamic Programming

HONORS AND AWARDS

- 2014 Stanford Graduate Fellow, Sequoia Capital Fellow
- 2014 NSF Graduate Research Fellowships Program honorable mention
- 2013 Goldwater Scholar
- Texas A&M Undergraduate Research Scholar. Graduated with University Honors, Foundation Honors, Honors in Mathematics, Engineering Scholar, and Summa Cum Laude distinctions.