NEAL S. JACKSON

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EDUCATION

University of Michigan, Ann Arbor — **Sept 2012 – May 2016**
B.S.E in Computer Engineering
GPA: 3.85

University of California, Berkeley — **August 2016 - Present**
Ph.D in Computer Science and Electrical Engineering

ACADEMIC AWARDS AND HONORS

NSF GRFP Honorable Mention — **September 2016**
EECS Undergraduate Research Award — **March 2016**
James B. Angell Scholar — **March 2014**

CONFERENCE PUBLICATIONS

Neal Jackson, J. Adkins, and P. Dutta. Capacity over capacitance for reliable energy harvesting sensors. *International Conference on Information Processing in Sensor Networks* (IPSN) 2019.

N. Klugman, V. Jacome, M. Clark, M. Podolsky, P. Pannuto, **Neal Jackson**, A. S. Nassor, C. Wolfram, D. Callaway, J. Taneja, and P. Dutta. Experience: Android resists liberation from its primary use case. *International Conference on Mobile Computing and Networking* (MobiCom) 2018.

J. Adkins , B. Ghena, **Neal Jackson**, P. Pannuto, S. Rohrer, B. Campbell, and P. Dutta. The Signpost Platform for City-Scale Sensing. *International Conference on Information Processing in Sensor Networks* (IPSN) 2018.

WORKSHOP PUBLICATIONS

Neal Jackson, J. Adkins, and P. Dutta. Reconsidering batteries in energy harvesting sensing. In Proceedings of the 6th International Workshop on Energy Harvesting & Energy-Neutral Sensing Systems, ENSsys'18, pages 14--18, New York, NY, USA, November 2018. ACM.

J. Adkins , B. Campbell, B. Ghena, **Neal Jackson**, P. Pannuto, and P. Dutta. Isolation Required for Multi-tenant Energy Harvesting Platforms. *International Workshop on Energy Harvesting and Energy Neutral Sensing Systems* (ENSys) 2017.

T. Zachariah, N. Klugman, B. Campbell, J. Adkins, **Neal Jackson**, P. Dutta. The Internet of Things Has a Gateway Problem. *Proceedings of the 16th Workshop on Mobile Computing Systems and Applications* (HotMobile) 2015.

POSTERS AND DEMOS

J. Adkins , B. Campbell, B. Ghena, **Neal Jackson**, P. Pannuto, and P. Dutta. Demo Abstract: The Signpost Platform for City-Scale Sensing. *International Conference on Embedded Networked Sensor Systems* (SenSys) 2017.

J. Adkins , B. Campbell, B. Ghena, **Neal Jackson**, P. Pannuto, and P. Dutta. Demo Abstract: The Signpost Network. *International Conference on Embedded Networked Sensor Systems* (SenSys) 2016.

RESEARCH EXPERIENCE

Graduate Research Assistant
University of California, Berkeley — Advisor: Prabal Dutta — **August 2016 - Present**
Research Assistant
University of Michigan, Ann Arbor — Advisor: Prabal Dutta — **May 2014 - September 2016**

All research is open source and freely available on github.com/lab11

Long Lifetime Wireless Computer Vision

- Lead the design of an energy harvesting, wireless camera platform with a lifetime of over 10 years.
- Platform will support local inference and processing, and adopts privacy by design to avoid leaking sensitive information.
- Future applications will include accurate occupancy counting, glare measurement and source identification, and reconfigurable object detection.

Indoor Energy Harvesting Sensing

- Lead the design of a non-intermittent, solar energy harvesting sensor platform with a lifetime of over 10 years.
- An exploration of available low power components and energy storage technologies and analysis of tradeoffs between platform size, cost, and lifetime.
- End result will serve as a research prototype for LBL EPIC 14-017 lighting control project as well as platform for autonomous semantic localization and metadata generation.

The Signpost Platform for City-Scale Sensing

- A self-sufficient, modular, energy harvesting sensing platform that easily attaches to street signposts.
- Enables fine-grained city sensing, simple sensor design for a modular interface, and easy deployment.