THEODORE SUMERS

11 Patton Ave, Princeton NJ 08540
ted.sumers@gmail.com | (551) 427-5793

Tech industry veteran embarking on a second career as a cognitive scientist.

PUBLICATIONS

Sumers, T.R., Ho, M.K., Hawkins, R.D., Narasimhan, K., Griffiths, T.L. (2020). Learning Rewards from Linguistic Feedback. *https://arxiv.org/abs/2009.14715*

Sumers, T.R., Ho, M.K., Griffiths, T.L. (2020). Show or Tell? Demonstration is More Robust to Changes in Shared Perception than Explanation. *Proceedings of the 42nd Annual Conference of the Cognitive Science Society*.

Patents on behavioral inferences and sensor fusion: US 9939276, 10297148, 10423834, 10445950, 10508925, 10672198

PROFESSIONAL EXPERIENCE

Uber Technologies **uber.com**
Data Scientist / Engineer → Engineering Manager *Fall 2014 – Fall 2019*

- Founded and lead team of research engineers (machine learning and signal processing) on large-scale sensor data:
  - Various behavioral inferences (GPS / IMU fusion, phone handling, co-presence) for Safety applications
  - Sequential models to analyze and optimize network efficiency for Marketplace teams
  - Embeddings for anomaly and fraud detection
- As an individual contributor, lead multiple research projects:
  - Hidden Markov Model for GPS noise reduction, securing approval from California Division of Measurement Standards as first ever GPS-based distance estimation device (approval, media, press release)
  - Launched Safety initiative using sensors to infer dangerous and distracted driving (media, press release, blog post)
  - Behavioral modeling of riders, structuring / visualizing / analyzing analytics data to infer price sensitivity

Automatic Labs **automatic.com**
Data Scientist / Engineer *Spring 2013 – Fall 2014*

- Algorithms for insights and products from vehicular and GPS data
- Firmware and software for communication with car computers (OBD-II)

Bridgewater Associates, LP **bwater.com**
Technology Associate Intern *Summer 2012*

- Intern team developing sandbox to prototype experimental trading algorithms
- Interfaced with investment researchers to define the product and integrate it into their existing analytics workflow

EDUCATION

Princeton University
PhD, Computer Science *Expected Spring 2024*

Dartmouth College
AB and BE, Electrical Engineering (GPA: 3.82; graduated Cum Laude; President of Tau Beta Pi) *Spring 2013*

UNDERGRADUATE RESEARCH & AWARDS

Hot-Wiring of the Future: Reverse-Engineering Automotive CAN
Reverse engineered automotive networks, mapping protocols and developing targeted attacks

- Hijacked speedometers, brakes, and doors; released tools as part of open-source GoodFET package (source code / hardware)
- Spoke at international cybersecurity conferences, including REcon 2013 and Breakpoint 2013 (deck)

Dartmouth Humanitarian Engineering: Small-Scale Hydropower Project
Battery charging system R&D for locally sourced small-scale hydropower installations in East Africa

- Awarded EPA's People, Prosperity, and the Planet grant for installation (press release / grant)
- Awarded 2011 IEEE Outstanding Student Humanitarian Prize (press release)
- Awarded NCIIA scholarship in 2012 Global Social Entrepreneurship Competition (press release)