LEAH PENG BURKHARDT

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Education

UC Berkeley College of Engineering: Bachelor of Science in Electrical Engineering & Computer Science (2017). GPA: 3.65.

Work History

Senior Software Engineer, Meta (2017–2023)

- ⋄ Tech Lead for the Developer Experience team of the ML Training platform (2021–2023)
  - ○ Led a team of 5 engineers to build a visualization extension in our IDE so that ML Engineers could analyze both locally and remotely trained workflows in real time while coding their models.
  - ○ Grew team from 1 to 4 as the founding tech lead of the team. Set up processes such as weekly team meetings, oncall, scrum, etc. Responsible for half-based team planning and quarterly planning adjustments.
  - ○ Migrated our build and release system from a centralized mega-package (which hit Meta-internal size limits) to a distributed architecture. Each package was less than half the size of the original and, working with the overall team effort, we improved release reliability from weekly to daily.
- ⋄ ML Training Platform (2018–2021)
  - ○ Led a team of 7 (3 eng) to migrate the integration of a Meta-specific recommendation training platform with zero downtime. We migrated both backend (implementation) and frontend (user-written DSL code), including providing tooling to rewrite user code to the new DSL. This impacted hundreds of customers and thousands of model training pipelines.
  - ○ Implemented a new model architecture (Two Tower Sparse Neural Network).
  - ○ Implemented a system that enabled users to write fail-fast validation checks of model training pipelines locally (before being sent to the remote cluster).
- ⋄ News Feed Ads Ranking (2017–2018)
  - ○ Built an offline analysis process to determine feature similarities and individual, contributions to key metrics, which allowed us to quickly remove unnecessary features and speed up training.

Research Papers and Presentations

- ⋄ Cathy Wu, Kanaad Parvate, Nishant Kheterpal, **Leah Dickstein**, Ankur Mehta, Eugene Vinitsky, Alexandre Bayen "Framework for Control and Deep Reinforcement Learning in Traffic" Intelligent Transportation Systems (2017)
- ⋄ **Leah Dickstein**, Vasuki Swamy, Gireeja Ranade and Anant Sahai "Finite Blocklength Coding for Low Latency High Reliability Wireless Communication" Allerton Conference on Communication, Control and Computing (2016)
- ⋄ Kevin Keller, Ethan Robinson, **Leah Dickstein**, Heidi Hahn, Alessandro Cattaneo, and David Mascarenas "Extending human proprioception to cyber-physical systems" Proc. SPIE 9803,

Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2016, 980304 (2016); doi:10.1117/12.2219534

◇ **Leah Dickstein** "Exhaust-ive Learning: Deep Reinforcement Learning for Energy Reduction on Highways" Term Paper for Graduate Deep Neural Networks. (2016)

◇ **Leah Dickstein**, Gireeja Ranade, and Anant Sahai "Delay in Control Systems" TECHCON (2015) Conference for top 10% of Semiconductor Research Corporation scholars

Scholarships and Awards

◇ NSF Center for Science of Information Scholar (2015–2017)
◇ Semiconductor Research Corporation Scholar (2014–2017)
◇ UC Berkeley Dept of EECS Outstanding Course Development and Teaching Award (2015-2016)
◇ Cal Alumni Assocation Leadership Award (2013–2014)

Certifications

◇ PADI Advanced Open Water Diver. Also drysuit certified.
◇ General-class amateur radio operator. Callsign: KN6WEL.
◇ Wilderness First Aid certified by the National Outdoor Leadership School (NOLS).
◇ AIARE 1 certified (avalanche safety and risk management).