Kevin Lu

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EDUCATION

UC BERKELEY | B.S. in Electrical Engineering and Computer Science (EECS)
Aug 2018 – May 2022 (Expected) | Berkeley, CA
Selected coursework (GPA: 4.00/4.00): * denotes in progress (Spring 2021)

Grad-level: Robotics, Unsupervised Learning, Classical Statistics, Population Games, Bandits & RL Theory*, NLP*, Robust Statistics*
Undergrad-level: Machine Learning, Artificial Intelligence, Probability, Convex Optimization, Algorithms, Biological Psychology*

EXPERIENCE

ROBOT LEARNING LAB | Undergraduate Researcher
June 2019 – Present | Berkeley, CA
Advised by Igor Mordatch, Aditya Grover, and Pieter Abbeel. I am broadly interested in artificial intelligence.

"Pretrained Transformers as Universal Computation Engines."
K. Lu, A. Grover, P. Abbeel, I. Mordatch. arXiv preprint 2021.
We show that a transformer pretrained on natural language can, without finetuning of the self-attention and feedforward layers, match the performance of transformer fully trained on a downstream non-language modality, effectively transferring in zero shot.

"Reset-Free Lifelong Learning with Skill-Space Planning."
K. Lu, A. Grover, P. Abbeel, I. Mordatch. ICLR 2021. Contributed talk at NeurIPS 2020 Deep RL Workshop.
We propose long-horizon planning in the skill space as a unified approach for reset-free RL, performing skill discovery both online and offline for use in planning, showing accurate planning over long horizons and handling challenges in the reset-free setting.

"Efficient Empowerment Estimation for Unsupervised Stabilization."
R. Zhao, K. Lu, P. Abbeel, S. Tiomkin. ICLR 2021.
We propose an efficient, unbiased empowerment estimator and show it learns an accurate empowerment landscape.

"Adaptive Online Planning for Continual Lifelong Learning."
K. Lu, I. Mordatch, P. Abbeel. Contributed talk (6% of papers) at NeurIPS 2019 Deep RL Workshop.
We develop a method, AOP, for reset-free nonstationary settings that augments planning with model-free RL in an efficient manner.

UC BERKELEY | Head Teaching Assistant, EECS 126 Probability and Random Processes
Jan 2019 – Present | Berkeley, CA
Head TA for EECS 126 (Sp21, Fa20). Responsible for organizing class logistics, creating content, grading, teaching, organizing staff, etc. Previously: EECS 126 TA (Fa19, Sp20); CS 70 Reader (Sp19); CSM CS 70 Mentor (Sp19).

HEARST LAB | Undergraduate Researcher
Sept 2018 – Mar 2019 | Berkeley, CA
Worked with Katie Stasaski and Marti Hearst on NLP; worked with data collection and classification/seq2seq models.

PROJECTS & CODE

LIFELONG RL CODEBASE | Aug '20 – Present | Python
Open-source Pytorch codebase developed for RL researchers.

ESPORTS DATA ANALYSIS | Oct '19 | Python
Analyzed professional match stats from eSport League of Legends.

SHEETS CALENDAR | Aug '18 – Sept '18 | Javascript
Developed a todo-list in Google Sheets that syncs with Calendar.

KNN MOVIE RECOMMENDER | May '18 | C++
Implemented k-nearest-neighbors for movie recommendation.

HONORS & AWARDS

- Eta Kappa Nu (EECS Honors Society) 2019
  Top third of students with junior standing by GPA
- Kraft Award for Freshmen 2018
  Awarded to ~4% of UC Berkeley freshmen
- USACO, Platinum Rank (Algorithms) 2017
  Highest rank of USA Computing Olympiad
- FBLA, 2nd in US (Cyber Security) 2017
  Placed 2nd out of 200 at national competition