Edward G. Huang

Mountain View, CA 94043
(213) 210-4864
eghuang@berkeley.edu

eghuang.com
Google Scholar
linkedin.com/in/eghuang

Education

University of California, Berkeley — B.A. in Applied Mathematics
· *Board Member*, Regents of the University of California - Sole undergraduate representing +250,000 students.

Experience

Google Search Ads Targeting — *Machine Learning Engineer, Geo Targeting* 2021 - Present

- Generated $\$X$ billion in revenue with novel targeting algorithms and advertiser product offerings.
- Owned and launched projects in ads quality, data richness, internal services, and regulatory compliance.
- Improved product quality metrics with a dual encoder transformer model trained on customer and user data.
- Conducted and analyzed live traffic experiments on billions of user queries for launch evaluation.

DeepMind Applied Research — *20% Research Engineer, AlphaZero* 2022 - 2023

- Launched a deep reinforcement learning (RL) resource optimization system in production.
- Added resource usage data features to improve agent learning velocity by $X\%$.
- Evaluated production candidates against classical baselines to show $X\%$ gains in efficient resource usage.

Apple AI/ML — *Machine Learning Engineer, Search Quality* 2020 - 2021

- Developed end-to-end user engagement models supporting question answering LLMs.
- Designed and evaluated research experiments for training transformers on multi-domain examples.
- Built large automated ML data pipelines on billions of user events with integrated testing and monitoring.

Santa Fe Institute — *NSF Research Fellow* 2018

- Proved 10+ novel mathematical results on "inference devices" in algorithmic information theory.
- Delivered a manuscript and final talk at SFI on Turing machine inference and information compressibility.

NASA & Berkeley Mathematics — *Researcher* 2017- 2021

- Published several first-author papers in peer-reviewed scientific journals.
- Led and mentored team of 2-5 top UC Berkeley students to predict astronaut cancer risk.
- Gave an invited talk to 100+ top scientists and policymakers at a national NASA conference.

Selected Papers

Lead author (shared), data collection, model training, manuscript writing.
Active learning over multiple domains in natural language tasks 2022
2022 NeurIPS DistShift Workshop. arxiv:2202.00254

Lead author, model implementation, experiment analysis and visualization, manuscript writing.
Winner of the 2020 COSPAR Outstanding Paper Award for Young Scientists
Simulating galactic cosmic ray effects: Synergy modeling of murine tumor prevalence 2020
Life Sciences in Space Research. doi:10.1016/j.lssr.2020.01.001

Contributing author, fieldwork, data collection and processing.
DNA degradation bias in passive sampling devices on metabarcoding studies 2018
PLoS ONE. doi:10.1371/journal.pone.0189188

Skills

Programming: C++, Python, Java, R, MATLAB, SQL, Scheme, Bash
Technologies: TensorFlow, Hadoop, Spark, Docker, S3, Git
Operating systems: UNIX, Linux