Eric Tang

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EDUCATION

Stanford University
M.S. in Computer Science, Artificial Intelligence   September 2022 - June 2024

University of California, Berkeley
B.S. in Electrical Engineering and Computer Science   August 2018 - May 2022
GPA: 3.82 / 4.0

EXPERIENCE

Meta (Facebook)   May 2022 - August 2022
Software Engineering Intern, Ads Core ML Modeling
- Designed, implemented, and evaluated a novel architecture change for scaling ads ranking models across Instagram and Facebook using PyTorch and Caffe2. Change now included in production package for online models.

Berkeley Artificial Intelligence Research   August 2020 - May 2022
Machine Learning Researcher
- Researched video understanding and natural language understanding with Dan Hendrycks under Prof. Dawn Song and Prof. Jacob Steinhardt. Published two papers in the NeurIPS Datasets and Benchmarks Track.

Accenture Labs   June 2020 - August 2020, June 2021 - August 2021
Technology Research Intern, Systems and Platforms Team
- Summer 2021: Built data pipelines and machine learning model serving APIs for a knowledge graph based digital twin platform using Apache Nifi, Stardog, Docker, and BentoML. Work resulted in a pending patent.
- Summer 2020: Designed software for generative design on warehouse layouts using Bayesian black box optimization and graph algorithms in Python.

University of California, Berkeley   January 2020 - May 2022
Lead Infrastructure TA for CS 61B - Data Structures
- Developed course autograder software ASAG, course grading tool Beacon , and various student facing debugging tools using Flask and Docker. Tools each served over 1000 students per semester.
- Oversaw team of 5 TAs in use and development of course infrastructure and software engineering workflows.

**UC Berkeley Physics - Crommie Group **   April 2019 – May 2022
Undergraduate Researcher
- Studied particle subdiffusivity at surfaces using STM imaging and convolutional neural networks. Work resulted in a published paper.

PROJECTS AND PUBLICATIONS

**How Would The Viewer Feel? Estimating Wellbeing From Video Scenarios **   NeurIPS D&B 2022
M. Mazeika*, Eric Tang*, A. Zou, S. Basart, D. Song, D. Forsyth, J. Steinhardt, and D. Hendrycks.
- We introduced two large-scale video datasets for predicting how videos would effect the emotional state and wellbeing of viewers, and evaluated state-of-the-art video transformer models on them. We found that models pretrained on action recognition tasks generalized well to predicting wellbeing and emotion.

**Measuring Mathematical Problem Solving with the MATH Dataset **   NeurIPS D&B 2021
D. Hendrycks, C. Burns, S. Kadavath, A. Arora, S. Basart, Eric Tang, D. Song, J. Steinhardt
- We collected 12,500 math problems, and found that GPT-3 models attained only 5% accuracy, with performance increasing slowly, even with scaling model size and pretraining.

**GPU-BSW Work Stealing **   Course Project - Applications of Parallel Computing
Brandon Wong*, Eric Tang*
- Implemented work stealing for a GPU implementation of the Smith-Waterman DNA sequence alignment Algorithm using CUDA and OpenMP in C++ for heterogenous computing environments. Decreased runtime by up to 25%

SKILLS

Programming: Python, Java, C/C++, SQL, OpenMP/MPI, CUDA, Docker, AWS
Machine Learning: Pytorch, Keras, Caffe2, Sklearn, CNNs, Transformers, RNNs/LSTMs
Select Coursework: Deep Neural Networks, Databases, Machine Learning, Full Stack Deep Learning, Optimization Models, Computer Architecture, Computer Security, Operating Systems, Applications of Parallel Computers, Deep Reinforcement Learning, Computer Vision, Natural Language Processing, Principles of Robot Autonomy, Deep Multi-Task and Meta Learning, Randomized Algorithms and Probabilistic Analysis