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

EXPERIENCE

Stanford Vision and Learning Lab — Jan 2023 - June 2024
Graduate Research Assistant

- Investigated parameter efficient fine tuning methods for video understanding by fusing RNNs and Vision Transformers. Second author paper currently under review at NeurIPS 2024. Advised by Prof. Juan Carlos Niebles

TikTok — June 2023 - September 2023
Research Intern, Computer Vision and Graphics - Intelligent Creation

- Redesigned model architecture for effect recommendations by developing new feature interaction modules, tuned multitask model performance using ESMM and Multi-Gate Mixture of Experts, and introduced a two-tower retrieval model using Tensorflow for development. Pushed models to production on TikTok app.

Meta — May 2022 - August 2022
Software Engineering Intern, Ads Core ML Modeling

- Designed, implemented, and evaluated methods for scaling ads ranking models across Instagram and Facebook using PyTorch and Caffe2. Changes now included in production package for CVR prediction models.

Berkeley Artificial Intelligence Research — August 2020 - May 2022
Undergraduate Researcher

- Worked on predicting emotional responses to video, and benchmarking performance of large language models on challenging math problems under Prof. Dawn Song and Prof. Jacob Steinhardt. Published two papers in the NeurIPS Datasets and Benchmarks Track, one of which was co-first authored

UC Berkeley EECS — January 2020 - May 2022
Lead Infrastructure TA for CS 61B - Data Structures

- Oversaw team of 5 TAs to develop 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.

Accenture Labs — June 2020 - August 2020, June 2021 - August 2021
Technology Research Intern, Systems and Platforms Team

- Developed model serving pipeline for a knowledge graph based digital twin platform using BentoML and Docker, and designed software for generative design on warehouse layouts using optimization methods in Python.

PUBLICATIONS

How Would The Viewer Feel? Estimating Wellbeing From Video Scenarios — NeurIPS 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. Oral (top 5%).

Measuring Mathematical Problem Solving with the MATH Dataset — NeurIPS 2021
D. Hendrycks, C. Burns, S. Kadavath, A. Arora, S. Basart, Eric Tang, D. Song, J. Steinhardt

- We collected 12,500 competition math problems, and found that GPT-3 models attained only 5% accuracy, with performance increasing slowly, even with scaling model size and pretraining.

SKILLS

Programming: Python, Java, C/C++, SQL, OpenMP/MPI, CUDA, Docker, AWS, Flask, Git
Machine Learning: PyTorch, Keras/Tensorflow, NumPy, PyTorch Lightning, Slurm, Transformers, PyTorch Distributed
Select Coursework: Berkeley: CS 182 - Deep Neural Networks, CS 189 - Machine Learning, CS 267 - Applications of Parallel Computers, CS 280 - Computer Vision, CS 288 - Natural Language Processing; **Stanford:** CS 237A/B - Principles of Robot Autonomy I/II, CS 330 - Deep Multi-Task and Meta Learning, CS 224W - Machine Learning with Graphs, CS 329D - Machine Learning under Distribution Shifts, CS 111 - Operating Systems (TA)