Rohan Taori

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Education

Stanford University Sep '20 - *Present*

Ph.D. Candidate in Computer Science

Studying the foundations of machine learning with an emphasis on the reliability of real-world systems.

University of California, Berkeley Aug '16 - May '19

B.S. in Electrical Engineering and Computer Science GPA: 3.98

Awards: Regents' & Chancellor's Scholar (top 2% of students), Highest Honors & Dean's List (top 3% of engineers)

Memberships: Eta Kappa Nu (HKN) honor society, 2019 Accel Scholar (program with VC firm Accel and Berkeley)

Research & Work

Berkeley AI Research – Undergraduate Researcher Aug '16 - July '20

- Worked with Prof. Ben Recht on understanding robustness in real-world distribution shifts.
  - Study was the largest to date: compared 200+ models with 200+ ImageNet distribution shifts.
- Worked with Prof. Jitendra Malik on sample efficient deep RL using non-parametric value functions.
- Worked with Prof. Carlo Séquin on finding optimal solutions of irregular solids via gradient descent.

Uber ATG – AI Research Resident Sep '19 - Mar '20

- Worked with Prof. Raquel Urtasun on large-scale traffic simulation for self-driving vehicles.

NVIDIA – Deep Learning Research Intern May - Aug '19

- Worked with Dr. Bryan Catanzaro on new techniques for large-scale texture synthesis in near real-time.
  - Developed a new architecture which improves generalization to unseen test-time textures.

Facebook – Software Engineering Intern May - Aug '18

- Built infrastructure to allow bots to send messages to hundreds of millions of users on the platform.

Salesforce – Software Engineering Intern May - Aug '17

- Developed an API tool to allow external developers to integrate with the Salesforce database via REST calls.

Teaching

Machine Learning @ Berkeley – VP of Education May '17 - Dec '18

- Led a 15-person team running two student classes, workshops, member bootcamps, and weekly reading groups.
- Created material for new deep learning class of 200 students; spearheaded creation of machine learning workshop series.
- Goal to bring ML education to students: content available for [fall17 / spring18 / fall18 / member class / workshops]

Papers

Rohan Taori, Achal Dave, Vaishaal Shankar, Nicholas Carlini, Benjamin Recht, Ludwig Schmidt. ***Measuring Robustness to Natural Distribution Shifts in Image Classification.*** In submission to NeurIPS 2020. [website / paper / code / plotting]

Guilin Liu, **Rohan Taori**, Ting-Chun Wang, Zhiding Yu, Shiqiu Liu, Fitsum A. Reda, Karan Sapra, Andrew Tao, Bryan Catanzaro. ***Transposer: Universal Texture Synthesis Using Feature Maps as Transposed Convolution Filter***. In submission. [paper / video]

Rohan Taori, Amog Kamsetty, Brenton Chu, Nikita Vemuri. ***Targeted Adversarial Examples for Black Box Audio Systems.*** Published at the 2019 IEEE Security and Privacy Workshops. [paper / code]

Murtaza Dalal*, Alexander Li*, **Rohan Taori***. ***Autoregressive Models: What Are They Good For?*** Appeared in NeurIPS 2019 Information Theory and ML Workshop. [paper]

Projects

Programming Language Classification – ML@B partnership with GitHub Aug - Dec '16

- Implemented 2-layer LSTM to classify programming languages, reducing error rate 40% compared to GitHub's baseline.

Take a Picasso – CalHacks 3.0 Project Oct '16

- Robotic sketch artist; won Best Hardware Hack, Best 3D Printed Hack, and Peter Thiel's 1517 Fund grant. [devpost]