Rohan Taori

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Education

Stanford University   Sep '20 - *Present*
Ph.D. student in Computer Science
Studying the foundations of machine learning with an emphasis on the reliability of real-world systems.
Awards: National Science Foundation Graduate Research Fellowship

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

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.* NeurIPS 2020. **Spotlight**. [website / paper / code / plotter]

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*. [paper / video]

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

Murtaza Dalal*, Alexander Li*, **Rohan Taori***. *Autoregressive Models: What Are They Good For?* 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]