

Vineet Kosaraju

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M.S./B.S. Honors, Computer Science (Artificial Intelligence, Systems). Tau Beta Pi Eng. Society. 4.025 GPA

Work Experience

6/20 - **OpenAI, Member of Technical Staff, San Francisco**

Contributed to multiple large releases across the company, including o1, o3, GPT-4, ChatGPT, WebGPT, and GPT-3.5. Investigated multi-task generalization on the Robotics team and researched possible improvements to the reasoning ability of large language models (LLMs) on the Reinforcement Learning (RL) team. Helped spin out the latter effort into a larger team investigating reasoning in the domain of math (the “Mathgen” team). Contributed to early research on improving general-purpose reasoning via large-scale RL, and was a foundational contributor for o1.

3/17 - 6/20 **Stanford Vision & Learning Lab, Researcher, Stanford**

Advanced state-of-the-art on social robotics with Dr. Silvio Savarese. Led projects on pedestrian motion prediction and contributed to work on shape completion. Resulted in three publications (two first-author, one second) in two of the leading industry conferences in machine learning and computer vision: NeurIPS and CVPR.

9/19 - 6/20 **Stanford University, Course Assistant: CS230 Deep Learning**

Also served as head TA for CS230 and led a team of 10 TAs for 250 students during spring quarter 19-20.

6/19 - 9/19 **Tesla Autopilot Vision, Artificial Intelligence Research Intern, Palo Alto**

Worked with Andrej Karpathy’s AI team in predicting pedestrian movements to self-driving vehicles. Also worked on “Smart Summon”, solving key bottlenecks to make our systems 6x as fast, allowing us to process tens of thousands of more data points every day and enabling Smart Summon to be deployed in all Autopilot-enabled Teslas.

6/18 - 9/18 **Google, Software Engineer Intern, Google Assistant Team, Mountain View**

Worked on Google Assistant on the Actions and Query Triggering team. Introduced new ranking features and explored unsupervised ML for response understanding.

1/18 - 12/20 **Invicted Inc, Co-founder & Chief Data Science Officer**

Co-founded Invicted as a socially conscious company building solutions for clients who have been released from the criminal justice system. Funded by Lightspeed Ventures (\$65k), Dorm Room Fund (\$20k), Cardinal Ventures (\$2k), 8VC (\$8k), and StartX SiR (\$6k).

1/18 - 6/18 **Stanford University, Section Leader: CS106A, CS106B**

Taught programming abstractions to 15 students weekly. Additionally held office hours.

6/17 - 9/17 **Google, Software Engineer Intern, Video Content Search Team, Mountain View**

Developed a pipeline for serving fresh, personalized videos to users. Built ML models for automatic video creation.

12/13 - 12/18 **MathAndCoding Inc, Co-founder**

Co-founded MathAndCoding, a non-profit designed to teach programming skills to students from elementary through high school at local libraries through grassroots education approaches. Resulted in 1000+ sessions to 4500+ students with 50+ teachers trained. I also designed new curricula, collaborated with LinkedIn, InfoSys (\$10k grant), and Adobe, and fundraised from a Kickstarter product (\$7482), using funding to provide students with laptops.

Research

Preprint **Let's Verify Step by Step**

Hunter Lightman*, [Vineet Kosaraju](#)*, Yura Burda*, Karl Cobbe*, OpenAI et al. 2023.

**co-first author*

Preprint **Training Verifiers to Solve Math Word Problems**

Karl Cobbe*, [Vineet Kosaraju](#)*, OpenAI et al. 2021.

**co-first author*

Preprint **WebGPT: Browser-assisted question-answering with human feedback**

Reiichiro Nakano, Jacob Hilton, Suchir Balaji, Jeff Wu, Long Ouyang, Christina Kim, Christopher Hesse, Shantanu Jain, [Vineet Kosaraju](#), OpenAI et al. 2021.

Preprint **Asymmetric self-play for automatic goal discovery in robotic manipulation**

NeurIPS '19 **Social-BiGAT: Multimodal Trajectory Forecasting using BiGANs and GATs**

[Vineet Kosaraju](#), Amir Sadeghian, Roberto Martin-Martin, Ian Reid, S. Hamid Rezatofighi, and Silvio Savarese. In *Advances in Neural Information Processing Systems 32 (NeurIPS)*, 2019.

CVPR '19 **SoPhie: An Attentive GAN for Paths with Social & Physical Constraints**

Amir Sadeghian*, [Vineet Kosaraju](#)*, Ali Sadeghian, Noriaki Hirose, S. Hamid Rezatofighi, and Silvio Savarese. In *Computer Vision and Pattern Recognition (CVPR)*, 2019.

**co-first author*

CVPR '19 **TopNet: Structural Point Cloud Decoder**

Lyne P. Tchapmi, [Vineet Kosaraju](#), et. al. In *Computer Vision and Pattern Recognition (CVPR)*, 2019.

CVPR '18 **The First Workshop on Joint Detection, Tracking, and Prediction in the Wild**

Organized workshop with topics ranging across detection, tracking and forecasting (TrajNet challenge).

JMB '16 **Principles for Predicting RNA Secondary Structure Design Difficulty**

Jeff Anderson-Lee*, Eli Fisker*, [Vineet Kosaraju](#)*, Michelle Wu*, Justin Kong, Jeehyung Lee, Minjae Lee, Mathew Zada, Adrien Treuille, and Rhiju Das. In *Journal of Molecular Biology (JMB)*, 2016. Page 428.

**co-first author*

Awards

2019 **Tau Beta Pi Engineering Honor Society**

Academic excellence & community service, awarded to top 12.5% of Stanford Engineering juniors.

2019 **Reviewer for 2020 Computer Vision and Pattern Recognition (CVPR)**

2019 **Advances in Neural Information Processing Systems (NeurIPS) Travel Award (\$500)**

2018 **Best Paper Award, Deep Learning (CS230) Second place in class of ~1000 students**

2017 **Member of Stanford Student Entrepreneurship Society ASES Bootcamp**

2015 **Intel Science Talent Search Semifinalist, 1 of 300 nationally**

2015 **Davidson Fellow, 1 of 20 nationally, \$10K scholarship recipient**

2015 **USA Computing Olympiad (USACO) Gold Division**

2014 **Siemens Regional Finalist, 1 of 30 projects nationally**