Suryaprakash Vengadesan

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Education

B.S. Electrical Engineering and Computer Science at University of California, Berkeley	2018-2022
Diploma from Irvine High School	2014-2018

Coursework (*Currently Enrolled)

Computer Science

CS189 Intro to ML	CS 172 Complexity & Computability*	CS 170 Algorithms & Intractability
CS 61C Machine Structures	CS 61B Data Structures	CS 61A Intro to CS
	CS 70 Discrete Math	

Electrical Engineering

EE127 Optimization in Eng.	EE126 Probability Theory	EE16B Systems and Devices II
	EE47D Systems and Devices I	

Mathematics

MATH104 Real Analysis*	MATH195 Dynamic Optimization*	MATH 170 Finite Optimization
	Math 110 Linear Algebra	

Work Experience

☐ Researcher (Berkeley AI Research Lab) — January 2021 - Present

- Investigating how demonstration data quantity and quality affects agent learning with two team members
- Team is supervised by Sid Reddy a graduate student advised by Prof. Sergey Levine
- Performed literature review in reinforcement learning, imitation learning, and meta learning
- Ran pytorch experiment to learn a task given demonstration data from different environments

☐ Blog Writer (ML at Berkeley Blog) — February 2021 - Present

- Attended weekly meetings to discuss blog ideas and copy edit other posts
- Wrote blog posts on Markov Decision Processes and Behavioral Cloning, explaining the theory with math examples and code implementations (more posts to come!)

☐ Project Member (NVIDIA) — September 2019 - December 2019

- Built tab autocomplete tool for Python text editors with two team members
- Team was supervised of Raul Puri from NVIDIA
- Hypertuned GPT-2 Model on webscraped Python code using the Huggingface API
- Model reached perplexity of 3.19 and performed basic predictions (i.e. in: import numpy -> out: as np)

☐ Project Member (UNICEF) — February 2019 - May 2019

- Predicted presence of mosquitoes given satellite images with seven team members
- Team was supervised Do-Hyun Kim from UNICEF
- Performed data pre-processing of satellite images that were used to hypertune DeepLabv3
- Image segmentation model reached accuracy of 63%

☐ Course Instructor (UC Berkeley) — Aug 2019 - May 2020

- Taught the Impact of AI DeCal (i.e. Student-Run Class) for two semesters
- Lectures on ML and it's impacts to our economy & society (i.e. Automation, Bias, AGI)
- Re-vamped material during Winter break by updating readings and content questions

☐ Co-Founder (REM) — May 2019 - March 2020

- Built a charity recommendation and donation app called Rem
- Built using Flutter for front-end and Firebase and Google's Compute Engine for backend
- Raised >$2k in preseed money and accepted to Harvard's i-Lab's Spring 2020 Venture Program

Misc.

I'm interested in recreational and competition mathematics. I am a member of the problem writing team for Berkeley Math Tournament ca. Jan 2021. I peruse texts and blogs on math's applications in puzzles, games, and art.