

Purva Tendulkar

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RESEARCH INTERESTS	<i>Deep Learning, Vision and Language, Reinforcement Learning, Creative AI, Music IR</i>	
EDUCATION	School of Interactive Computing, Georgia Tech <i>M.S. in Computer Science</i> Advised by Prof. Devi Parikh CGPA : 4.0/4.0	2018-Present
	College of Engineering Pune (COEP) <i>B.Tech. in Computer Science</i> CGPA : 9.14/10.0	2014-2018
PUBLICATIONS & PREPRINTS	SQuINTing at VQA Models: Interrogating VQA Models with Sub-Questions <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2020</i> R. R. Selvaraju, <u>P. Tendulkar</u> , D. Parikh, E. Horvitz, M. Ribeiro, B. Nushi, E. Kamar	
	Trick or TReAT: Thematic Reinforcement for Artistic Typography <i>International Conference on Computational Creativity (ICCC) 2019 (Oral)</i> <u>P. Tendulkar</u> , K. Krishna, R. R. Selvaraju, D. Parikh	
AWARDS & RECOGNITION	Winner: Best Presentation Award at ICCV'19 Recipient: Pratibha Eaton Excellence Award for women engineering students (2017) Finalist: Computer and Science Quiz organized by Computer Society of India (2011) Recipient: Maharashtra Talent Search Award (2009)	
RELEVANT COURSES	Graduate Coursework <ul style="list-style-type: none">• Deep Learning • Machine Learning • Natural Language Processing• Computer Vision • Introduction to Graduate Algorithms Selected Undergraduate Coursework <ul style="list-style-type: none">• Natural Language Processing • Linear Algebra• Experimental Design and Data Analysis • Data Structures• Design and Analysis of Algorithms • Discrete Structures and Graph Theory• Computer Algorithms in Signal Processing • Advanced Unix Programming	
EXPERIENCE	AiBee Corp, Palo Alto <i>Research Intern, mentored by Chunhui Gu and Juan Carlos Nieves</i> Understanding and detecting events in videos and understanding intentions based on trajectories.	May 2019-Aug 2019
	Visual Intelligence Lab, Georgia Tech <i>Research Assistant, mentored by Prof. Devi Parikh</i> Conducting research in trustworthy AI and creative AI applications such as “Google doodle” generation, and teaching RL agents to dance.	Aug 2018-May 2020
	CPS Research Group, NTU <i>Research Assistant, mentored by Prof. Arvind Easwaran</i> Studied and modeled some well-known attacks on existing Cyber Physical Systems.	May 2017-Aug 2017

IIT, Bombay

May 2016-Aug 2016

Software Developer, mentored by Prof. Varsha Apte

Worked on EvalPro, a Django webapp being used in the CSE Department of IIT Bombay for handling computer related tests, assignments and automated evaluation.

SELECTED PROJECTS

Dancing Agents

Mentored by Prof. Devi Parikh, Dr. Ani Kembhavi and Abhishek Das

We explore the design of primitive reward functions that can lead to the emergence of interesting dance in an RL agent, given an input signal like music. We analyse the minimum number of specifications required to generate interesting dance and explore notions of creativity in dance.

Blind Image Dehazing

Mentored by Yuval Bahat and Kalpesh Krishna

Implemented the ICCP 2016 paper Blind Image Dehazing Using Internal Patch Recurrence. Improvised the method for selecting pairs of image patches for blind dehazing as compared to the original brute force method. Achieved approximately 20x better speed for optimization in PyTorch as compared to the original MATLAB implementation.

REFERENCES

- Prof. Devi Parikh, Georgia Tech (email: parikh@gatech.edu)
- Dr. Aniruddha Kembhavi, AI2 (email: anik@allenai.org)
- Dr. Chunhui Gu, AiBee Corp. (email: chgu@aibee.com)
- Dr. Juan Carlos Niebles, Stanford University (email: jniebles@cs.stanford.edu)
- Prof. Arvind Easwaran, NTU (email: arvinde@ntu.edu.sg)