Purva Tendulkar

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RESEARCH INTERESTS

Deep Learning, Vision and Language, Reinforcement Learning, Creative AI

EDUCATION

School of Interactive Computing, Georgia Tech 2018-Present
M.S. in Computer Science
Advised by Prof. Devi Parikh
CGPA : 4.0/4.0

College of Engineering Pune (COEP) 2014-2018
B.Tech. in Computer Science
CGPA : 9.14/10.0

PUBLICATIONS & PREPRINTS

SQuINTing at VQA Models: Interrogating VQA Models with Sub-Questions
arXiv 2020 **(Under Review)**
R. R. Selvaraju, **P. Tendulkar**, D. Parikh, E. Horvitz, M. Ribeiro, B. Nushi, E. Kamar

Trick or TReAT: Thematic Reinforcement for Artistic Typography
International Conference on Computational Creativity (ICCC) 2019 **(Oral)**
P. Tendulkar, K. Krishna, R. R. Selvaraju, D. Parikh

AWARDS & RECOGNITION

Winner: Best Presentation Award at ICCC'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
• Deep Learning • Machine Learning • Natural Language Processing
• Computer Vision • Introduction to Graduate Algorithms
Selected Undergraduate Coursework
• 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 May 2019-Aug 2019
Research Intern, mentored by Chunhui Gu and Juan Carlos Niebles
Understanding and detecting events in videos and understanding intentions based on trajectories.

Visual Intelligence Lab, Georgia Tech Aug 2018-May 2020
Research Assistant, mentored by Prof. Devi Parikh
Conducting research in trustworthy AI and creative AI applications such as "Google doodle" generation, and teaching RL agents to dance.

CPS Research Group, NTU May 2017-Aug 2017
Research Assistant, mentored by Prof. Arvind Easwaran
Studied and modeled some well-known attacks on existing Cyber Physical Systems.

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)