Aditi A. Mavalankar

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EDUCATION

Ph.D., Computer Science and Engineering, Artificial Intelligence *Expected: June 2023*

University of California, San Diego (UC San Diego), USA.

Advisor: Prof. Sicun Gao

B.Tech (Honors), Computer Science and Engineering *August 2016*

International Institute of Information Technology (IIIT), Hyderabad, India.

RESEARCH EXPERIENCE

Graduate Student Researcher, UC San Diego *September 2018 - Ongoing*

Working with Prof. Sicun Gao on sample-efficient skill learning and transfer using deep reinforcement learning algorithms for continuous control problems.

Research Student, UC San Diego *April 2017 - December 2017*

Built a graph recommendation system on a dataset of Indian politics to study interactions over time and discover patterns. Advisor: Prof. Julian McAuley

MENTORING EXPERIENCE

Co-organizer, ExploreCSR - Workshops for Women *September 2019 - Ongoing*

Co-leading ExploreCSR, a Google-sponsored program to provide exposure to Computer Science research to women. We aim to provide regular mentorship to community college women from graduate students and help them connect to the research community within UC San Diego.

Graduate Student Lead, Early Research Scholars Program *September 2016 - June 2018*

Mentored 10 groups of undergraduate students as a part of the Early Research Scholars Program funded by the NSF, and coordinated and managed by Prof. Christine Alvarado.

INDUSTRY EXPERIENCE

Applied Scientist Intern, Amazon Lab126, Sunnyvale *June 2018 - September 2018*

Worked on a confidential project in the Computer Vision team.

Software Development Engineering Intern, Amazon Lab126, Sunnyvale *June 2017 - September 2017*

Developed the computer vision software pipeline that involved implementing algorithms on human detection, tracking and depth-estimation on real-time video input. (Confidential)

PUBLICATIONS

N.S. Uppara, **A. Mavalankar**, K. Vemuri. Eye tracking in naturalistic badminton play: comparing visual gaze pattern strategy in world-rank and amateur player. *The 7th Workshop on Pervasive Eye Tracking and Mobile Eye-Based Interaction, 2018.*

C. Venkatesh, G. Ahuja, **A. Mavalankar**. How does a program run? A visual model based on Annotating Abstract Syntax Trees. *4th IEEE Conference on Learning and Teaching in Computing and Engineering (LaTiCE), 2016.*

A. Mavalankar, T. Kelkar, C. Venkatesh. Generation of Quizzes and Solutions based on Ontologies - a Case for a Music Problem Generator. *The 7th IEEE International Conference on Technology for Education (T4E), 2015.*

A. Mavalankar, S. Dagar, K. Vemuri. Decoding (un)known opponent's game play, a real-life badminton eye-tracking study. *EuroAsianPacific Joint Conference on Cognitive Science (EAPCogSci), 2015.*

TEACHING EXPERIENCE

UC San Diego

CSE 291: Topics in Search and Reasoning (Prof. Sicun Gao) *March 2019 - June 2019*
CSE 191: Introduction to CS Research (Prof. Christine Alvarado) *September 2017 - December 2017*
CSE 190: Research Methods (Prof. Christine Alvarado) *September 2016 - December 2016*

IIIT Hyderabad

Artificial Intelligence (Prof. Praveen Paruchuri) *January 2016 - May 2016*
Mathematics III (Prof. Shobha Oruganti) *July 2015 - December 2015*
Mathematics II (Prof. Shobha Oruganti) *January 2015 - May 2015*
Mathematics III (Prof. C. N. Kaul) *July 2014 - December 2014*

RECENT PROJECTS

Task Generalization by Transferring Skills using Value Function Composition *2019*
Online Policy Adaptation using Divergence Models and Self-Imitation *2019*
Modeling inverse dynamics for generalization in continuous control *2019*
Monocular depth estimation in the autonomous driving scenario *2018*
Implementation of SAT Solvers *2017*
Bayesian Graph-Recommender Systems *2017*
Analysis of change in political social networks over time *2017*
Recommendation system for Amazon products *2017*

SKILLS

Programming languages: Python, C, C++, MATLAB, Javascript
Deep learning toolkits: PyTorch, Tensorflow, MXNet, Keras
Other toolkits/libraries: OpenAI Gym, Mujoco, PyBullet, OpenCV, Caffe, NumPy

RELEVANT COURSEWORK

Probabilistic Learning and Reasoning
Automated Reasoning in AI
Recommender Systems and Social Networks
Data Analytics using Spark
Information Retrieval and Extraction
Statistical Methods in AI
Recent Advances in Computer Vision
Algorithms

SELECTED ACHIEVEMENTS AND AWARDS

Masters Award for Excellence in Service/Leadership at UC San Diego *2018*
Research Award at IIIT Hyderabad *2015*
Dean's Award for Academic Excellence at IIIT Hyderabad *2012-2016*

REFERENCES

Prof. Sicun Gao
Assistant Professor
University of California, San Diego

Prof. Christine Alvarado
Teaching Professor
University of California, San Diego