Susobhan Ghosh

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⌂ github.com/susobhang70

Education

PhD Student, *Computer Science*, Harvard University, CGPA - 3.9/4.0.

B.Tech (Honors) + M.S. by Research, *Computer Science*, IIIT Hyderabad, CGPA - 9.29/10.

Experience

Aug 2020 - Present
Graduate Research Assistant, *SEAS*, Harvard University.
Advised by Prof. Susan Murphy

Sep 2019 - Dec 2020
Research Engineer, *School of Information Systems*, Singapore Management University.
A: Dr. Pradeep Varakantham. Developing defenses for adversarial attacks on machine learning models.

Aug 2018 - May 2019
Graduate Research Assistant, *Machine Learning Lab*, IIIT Hyderabad.
Advisors: Dr. Praveen Paruchuri and Dr. Sujit Gujar. Developed algorithms for an autonomous trading agent for energy markets. Placed 2nd in annual PowerTAC 2018 competition.

Aug 2016 - May 2019
Teaching Assistant, *IIIT Hyderabad*.
(i) Principles of Information Security (Spring 2019, Spring 2018), (ii) Introduction to Game Theory (Monsoon 2017), (iii) Computer Networks (Spring 2017), and (iv) SSAD & Project (Monsoon 2016)

May–July 2018
Research Intern, *Innovation Labs*, Tata Consultancy Services - Hyderabad.
Advisors: Dr. Easwar Subramanian and Dr. Sanjay Bhat. Improved, and developed new trading algorithms for a trading agent in the energy market. *Java, Python*

May–July 2017
Research Intern, *Innovation Labs*, Tata Consultancy Services - Hyderabad.
Advisors: Dr. Easwar Subramanian and Dr. Sanjay Bhat. Developed a power trading agent & benchmarked against past agents using PowerTAC testbed. *Java*

May – Sep 2016
Google Summer of Code, LibreOffice, ⎘.
Developed 7 panels and 3 decks in the sidebar for the LibreOffice suite (released in v5.3). Panels offered quick settings for page formatting, background, fonts, media playback, headers & footers etc. *C++, Glade*

June 2015
Teaching Assistant, *IIT Kharagpur*, Network Management Workshop.
Instructor - Dr. Swapan Purkait. *Bash, Networking, Linux, Cisco Packet Tracer*

July 2014
Teaching Assistant, *Nettech Private Limited*, Network Management Workshop - Kolkata.
Instructor - Dr. Swapan Purkait. *Bash, Networking, Linux, Cisco Packet Tracer*

Publications

reBandit: Random Effects based Online RL algorithm for Reducing Cannabis Use, *Susobhan Ghosh, Yongyi Guo, Pei-Yao Hung, Lara Coughlin, Erin Bonar, Inbal Nahum-Shani, Maureen Walton, Susan Murphy*, Under Review, ⎘.

Book Chapter
VidyutVanika: AI-Based Autonomous Broker for Smart Grids: From Theory to Practice, *Sanjay Chandlekar, Bala Suraj Pedasingu, Susobhan Ghosh, Easwar Subramanian, Sanjay Bhat, Praveen Paruchuri, Sujit Gujar*, Applied Innovation and Technology Management Book Series - Energy Sustainability through Retail Electricity Markets, ⎘.

MLJ
Did we personalize? Assessing personalization by an online reinforcement learning algorithm using resampling, *Susobhan Ghosh, Raphael Kim, Prasidh Chhabria, Raaz Dwivedi, Predrag Klasnja, Peng Liao, Kelly Zhang, Susan Murphy*, Machine Learning Journal - Special Issue on Reinforcement Learning for Real Life, ⎘.

AAMAS-23
Fairness for Workers Who Pull the Arms: An Index Based Policy for Allocation of Restless Bandit Tasks, *Arpita Biswas, Jackson Killian, Paula Diaz, Susobhan Ghosh, Milind Tambe*, In proceedings of the 22nd International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2023, ⎘.

AAMAS-22   **Efficient Algorithms for Finite Horizon and Streaming Restless Multi-Armed Bandit Problems**, *Aditya Mate, Arpita Biswas, Christoph Siebenbrunner, Susobhan Ghosh, Milind Tambe*, In proceedings of the 21st International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2022, ☑.

IAAI-22   **Facilitating human-wildlife cohabitation through conflict prediction**, *Susobhan Ghosh, Pradeep Varakantham, Aniket Bhatkhande, Tamanna Ahmad, Anish Andheria, Wenjun Li, Aparna Taneja, Divy Thakkar, Milind Tambe*, In proceedings of the 34th Annual Conference on Innovative Applications of Artificial Intelligence (IAAI), 2022, ☑.

IAAI-22   **Using Public Data to Predict Demand for Mobile Health Clinics**, *Haipeng Chen, Susobhan Ghosh, Gregory Fan, Nikhil Behari, Arpita Biswas, Mollie Williams, Nancy E. Oriol, Milind Tambe*, In proceedings of the 34th Annual Conference on Innovative Applications of Artificial Intelligence (IAAI), 2022, ☑.

AAAI-20   **Bidding in Smart Grid PDAs: Theory, Analysis and Strategy**, *Susobhan Ghosh, Sujit Gujar, Praveen Paruchuri, Easwar Subramanian, Sanjay P. Bhat*, In proceedings of Thirty-Fourth AAAI Conference on Artificial Intelligence, ☑.

AAAI-19   **VidyutVanika: A Reinforcement Learning Based Broker Agent for a Power Trading Competition**, *Susobhan Ghosh, Easwar Subramanian, Sanjay P. Bhat, Sujit Gujar, Praveen Paruchuri*, In proceedings of Thirty-Third AAAI Conference on Artificial Intelligence, ☑.

MS Thesis   **Learning Strategies for Power Trading in Smart Grids**, *Susobhan Ghosh*, International Institute of Information Technology, Hyderabad, ☑.

PASS-19   **VidyutVanika: An Autonomous Broker Agent for Smart Grid Environment**, *Susobhan Ghosh, Kritika Prakash, Sanjay Chandlekar, Easwar Subramanian, Sanjay P. Bhat, Sujit Gujar, Praveen Paruchuri*, Accepted for Policy, Awareness, Sustainability and Systems (PASS) Workshop.

Achievements & Honors

Gold Medalist: Awarded for having highest CGPA in class of 2015.

Dean's Merit List: Award for Academic Excellence for years 2015-16, 2016-17 & 2017-18

AAAI Student Scholarship and Volunteer: Awarded to students publishing in AAAI conference.

Microsoft Research Travel Grant: To attend AAAI-19

Central Sector Scheme of Scholarship (CSSS) 2013

Prime Minister Scholarship Scheme (PMSS) 2013

ACM ICPC 2014: Qualified for the Onsite Kharagpur Regionals