Ayush Jain

Cognitive Learning for Vision and Robotics (CLVR) Lab
Computer Science Department, USC
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Education

University of Southern California Aug 2018 - Present
PhD in Computer Science with Joseph J Lim, GPA: 4.0/4.0

Indian Institute of Technology Delhi July 2012 - June 2016
B.Tech in Electrical Engineering, GPA: 8.991/10

Research Interests

Reinforcement Learning, Recommender Systems, Relational Learning, Generalization

Publications

- **[In Submission to ICLR 2023]** N. Kosaka*, **A. Jain***, X. Li, K. Kim, J. Lim. "Hedge Your Actions: Flexible Reinforcement Learning for Complex Action Spaces." [Paper]
- **[In Submission to ICLR 2023]** G. Zhang, **A. Jain**, I. Hwang, S. Sun, J. Lim. "Efficient Multi-Task Reinforcement Learning via Selective Behavior Sharing." **NeurIPS 2022 Deep RL Workshop**. [Paper]
- **A. Jain***, N. Kosaka*, K. Kim, J. Lim. "Know Your Action Set: Learning Action Relations for Reinforcement Learning". *International Conference on Learning Representations*, **ICLR 2022**. [Paper | Talk]
- **A. Jain***, A. Szot*, and J. Lim. "Generalization to New Actions in Reinforcement Learning". *International Conference on Machine Learning*, **ICML 2020**. [Paper | Talk | Environment]
- **A. Jain**, V. Singh, S. Ranjan, R. Rajkumar, S. Agarwal. "Uniform Information Density Effects on Syntactic Choice in Hindi". *Workshop on Linguistic Complexity and NLP* at COLING 2018, Santa Fe. [Paper]
- **A. Jain**, V. Singh, S. Agarwal, and R. Rajkumar. "Uniform Information Density models for language production". *39th Annual Conference of the German Linguistic Society*, DGfS 2017. [Abstract | Slides]

Industry Experience

- **Research Intern, Naver CLOVA AI Research**, Seoul, South Korea (remote)
  Varying action space in RL for Recommender Systems. June 2021 – Dec 2021
  Large and complex action space in RL for Recommender Systems. May 2022 – Aug 2022
- **Engineer, Samsung Research**, Seoul, South Korea September 2016 – June 2018
  Market Prediction, Anomaly Detection, Information Extraction & Data Unification.
- **Intern, Samsung Electronics**, Suwon, South Korea May 2015 – July 2015
  Smart Thermostat Schedule Learning Algorithm

Achievements

- Director's award for being in the top 7% of IIT Delhi for three semesters (2013-14).
- All India Rank of 198 in IITJEE taken by over half a million students (2012).
- All India Rank of 91 in AIEEE taken by over a million students (2012).
- Central Board of Secondary Education Merit Certificate for securing India top 0.1% (2012).
- KVPY Fellowship Award and National Talent Search Examination (NTSE) Scholarship Award.
- All India Rank of 3 in National Science Talent Search Examination, NSTSE (2011).
- Top 30 in Indian National Astronomy Olympiad (2012).

Teaching and Service

- **Teaching Assistant**, CSCI566: Deep Learning and its Applications, USC. Fall 2019, Fall 2020
- **Teaching Assistant**, CSCI599: Deep Learning and its Applications, USC. Spring 2019
- **Reviewer**: CoRL (2021, 2022), ICLR (2023).