MOHIT SHARMA

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EDUCATION

Purdue University *Aug 2016 - May 2018*
Joint MS in Computer Science/Statistics GPA: 3.73/4.0

Indian Institute of Technology *July 2010 - May 2015*
B.Tech and M.Tech (Dual Degree) in Computer Science and Engineering GPA: 8.23/10.0

COURSES AND SKILLS

Courses	Adaptive Control and Reinforcement Learning, Deep Learning, Causal Inference, Mathematical Statistics, Stochastic Processes, Computational Optimization, Statistical Machine Learning, Real Analysis, Linear Algebra
Frameworks & Packages	PyTorch, scikit-learn, Blender, RabbitMQ, Redis, OSM, PostgreSQL, QGIS
Programming Languages	Python, Julia, PHP, C++, Elixir

EXPERIENCE

Georgia Tech, *Research Scholar, Prof. Devi Parikh & Prof. Dhruv Batra* August 2018 - Present

- Working on unsupervised method for task agnostic decision discovery of 'Decision States' using Intrinsic Control (preliminary results presented at *TARL Workshop, ICLR 2019*)
- Worked on *Instrument Recognition in Polyphonic Music* using Attention based Multi-Instance Multi-Label classification framework under weak-supervision (under review at *ISMIR 2019*)
- Implemented 3D Simulation Environment with CLEVR dataset objects for testing reasoning abilities of Embodied Agents. The rendering backend was implemented on top of *Blender* with a python API for handling navigation.

Purdue University, *Research Assistant, Prof. Xiao Wang* June 2017 - May 2018

- Worked on Non-Parametric Spatial Transformation Networks for Anatomical Brain MRI Segmentation.
- Achieved 98.5% accuracy for Wheat-Crop growth-stage classification using Places CNN models.

Vmock, *Product Engineer* (New Delhi, India) December 2016 - July 2016

- Redesigned & implemented Resume-Parser library to allow integration with existing and future applications.
- Implemented Presentation Checks library to provide feedback on content presentation in resumes.

Housing.com, *Software Developer* (Mumbai, India) May 2016 - Dec 2016

- Managed query optimization for accessing and processing geo-spatial data (Real-Estate data & Map Interface)
- Implemented APIs for region-centric advertisement service for Real Estate Developers.

Hong Kong University of Science and Technology, *Research Intern* (Hong Kong) Summer 2014

- Studied relationship between spatial distribution of traffic and land-use pattern in Beijing & NYC using large scale taxi-trace and social media data.
- Used PostGIS & QGIS to process road-network shapefiles from OpenStreetMaps stored in PostgreSQL database.

Qualcomm Inc., *Engineering Intern* (Hyderabad, India) Summer 2013

- Implemented submodule and severity based debugging facility in the kernel code for the Multimedia team.
- Developed real-time handwriting recognition system for IdeaQuest, innovation challenge at Qualcomm India.

OTHER ACADEMIC PROJECTS

ICLR 2018 Reproducibility Challenge ★116 ⑂31 Fall 2017

Implemented *Adversarial Learning for Semi-Supervised Semantic Segmentation* in PyTorch

Homogeneous Self-Dual and Primal Dual Methods for LPs Fall 2017

Implemented Homogeneous Self-Dual algorithm for reliable infeasibility/unboundedness detection.

Role of mentions in Tweet Virality (Masters Thesis) Fall 2014, Spring 2015

Developed *Easy Mention*, a real-time data-driven mention-recommendation system to enhance tweet popularity.

REFEREED PUBLICATIONS

- *Unsupervised Discovery of Decision States through Intrinsic Control,* Nirbhay Modhe, **Mohit Sharma**, Prithvijit Chattopadhyay, Abhishek Das, Devi Parikh, Dhruv Batra, Ramakrishna Vedantam, *TARL Workshop, ICLR 2019*

- *Easy-Mention: A Model driven Mention Recommendation System to Boost your Tweet Popularity,* Soumajit Pramanik, **Mohit Sharma**, Maximilien Danisch, Qinna Wang, Jean-Loup Guillaume and Bivas Mitra, *International Journal of Data Science and Analytics (JDSA), Springer, 2017*

ACHIEVEMENTS

- Finalist of ACM/ICPC 2012 Multi-Provincial Programming Algorithmic Contest at IIT Kharagpur.
- Ranked 916 out of around 500,000 applicants in Indian Institute of Technology Joint Engineering Exam 2010.