

Samarth Mishra

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EDUCATION	<ul style="list-style-type: none">• Boston University Boston, MA PhD Student in Artificial Intelligence (GPA : 4.0/4) Advisors : Prof. Derry Wijaya & Prof. Kate Saenko 2019-Present• Georgia Institute of Technology Atlanta, GA Masters in CS with specialisation in ML (GPA : 4.0/4) Advisor : Prof. James M. Rehg 2017-2019• Indian Institute of Technology, Bombay Mumbai, India B. Tech (Honors) in CS and Minor in EE (GPA : 9.46/10) 2013-2017
PUBLICATIONS	<p>S. Stojanov, <i>Samarth Mishra</i>, A. Thai, N. Dhanda, A. Humayun, C. Yu, L. B. Smith, J. M. Rehg: Incremental Object Learning from Contiguous Views. <i>Oral, IEEE Conference on Computer Vision and Pattern Recognition (CVPR)</i>, 2019</p> <p>K. Chatterjee, B. Kragl, <i>Samarth Mishra</i>, A. Pavlogiannis: Faster Algorithms for Weighted Recursive State Machines. <i>26th European Symposium on Programming (ESOP)</i>, 2017</p>
EXPERIENCE	<p>Graduate Student Researcher Georgia Tech Ongoing Research on Computer Vision and Deep Learning with Prof. James M. Rehg: <ul style="list-style-type: none">• Incremental Object Learning (CVPR' 19): Introduced a new synthetic data generating environment and a 3D object dataset for incremental object learning. Established importance of repetition in incremental learning and introduced the paradigm of weak supervision along with a baseline solution.• Discriminative 3D Shape Representations : Working on learning discriminative 3D shape representations from multiple object views without explicit class supervision.</p> <p>MTS - Intern (Machine Learning) Nutanix Inc. Summer 2018 Established a proof of concept for using semantic parsing and machine learning to handle natural language queries on a subset of Nutanix's multi-cluster management database.</p> <p>Software Engineering Intern Samsung Summer 2016 Developed a mobile application on Tizen3.0 OS for process monitoring via log parsing, with a user friendly UI, notification alerts and active responses for misbehaving processes</p> <p>Visiting Student Researcher IST Austria Summer 2015 Implemented a fast reachability algorithm on weighted recursive state machines(RSMs) with finite height semiring weights. Established significant speed improvement over jMoped on SLAM/SDV</p> <p>Teaching <ul style="list-style-type: none">• Graduate Teaching Assistant for AI at Georgia Tech (Spring 2018 - Spring 2019)• Teaching Assistant for 3 classes in CS and Math at IIT Bombay : (2015-17) Computer Networks, Intro to Computer Programming, Intro to Linear Algebra</p>
KEY ACADEMIC PROJECTS	<p>GPGPU solutions for Linear Least Squares Problem Spring 2018 Implemented the following general purpose GPU (GPGPU) solutions for the linear least squares problem and compared with the corresponding CPU implementations : Householder QR decomposition, Cholesky decomposition and Givens QR decomposition</p> <p>Kernel Dictionary Learning (Bachelor's Thesis) 2016-17 Implemented kernel dictionary learning on a spherical manifold. Studied the effect of different regularizers and kernels, on robustness in classification performance of the algorithm, under different kinds and intensities of noise, on MNIST handwritten digits dataset</p> <p>Medical Image Segmentation : DeepCut Spring 2017 Implemented DeepCut image segmentation algorithm and used it to segment out the heart from human chest MR images. Used a conv net for soft segmentation and a dense CRF for regularization.</p>
SKILLS	<ul style="list-style-type: none">• Languages : C C++ Java Python MATLAB Bash HTML Javascript CSS \LaTeX• Technologies : PyTorch Tensorflow Theano CUDA Blender Numpy Hadoop Pig Spark
ACHIEVEMENTS AND AWARDS	<ul style="list-style-type: none">• Awarded Institute Academic Prize, IIT Bombay 2014• All India Rank 30 in JEE-Main among 1.3 million candidates 2013• Gold medal in Indian National Physics Olympiad for being among top 35 in India 2013• PM's Trophy Scholarship, awarded by Steel Authority of India Ltd. 2013-17• Kishore Vaigyanik Protsahan Yojana (KVPY) scholar : All India Rank 27 2012-13• National Talent Search Examination (NTSE) scholar 2009-12