ABHISHEK MOHTA

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EDUCATION

Carnegie Mellon University - School of Computer Science December 2019
M.S., Computer Science, CGPA: 4.17/4.0
Coursework: Deep Reinforcement Learning*, Algorithms*, Probabilistic Graphical Models, Neural Networks for NLP, Distributed Systems, Machine Learning, Deep Learning, Probability and Mathematical Statistics
Teaching Assistant: Topics in Deep Learning (Prof. Ruslan Salakhutdinov)

Birla Institute of Technology and Science (BITS) Pilani, Goa, India July 2017
M.Sc. Economics, B.E. Computer Science, CGPA: 9.41/10
Merit Scholar - 8/10 semesters (top 2% of >600 students)

SKILLS

Programming Languages: C, Java, Python, C#
Tools and Frameworks: PyTorch, Tensorflow, CNTK, Git, Powershell, Visual Studio

EXPERIENCE

Uber ATG, Prediction Team, Summer Intern, Pittsburgh, PA May 2019 - August 2019
· Guide: Dr. Tzu-Kuo Huang, Senior Autonomy Engineer, Uber ATG
· Developed a novel algorithm to predict the trajectories of actors surrounding the autonomous vehicle.
· Built a model to learn the pure pursuit parameters from data; theoretically proved feasibility of solution and implemented the model end-to-end.

Microsoft Research, Research Fellow, Bangalore, India July 2017 - June 2018
· Guide: Dr. Prateek Jain, Senior Researcher, Microsoft Research India
· Enhanced the PROSE framework (in MS Excel) with machine-learned models replacing hand-written heuristics.
· Implemented Neural Guided Deductive Search (NGDS) - a hybrid of symbolic logic techniques and statistical models - using LSTMs in CNTK to prune branches in the synthesis process, improving performance by >75%.
· Paper published at International Conference on Learning Representations (ICLR) 2018 and patent filed.

Microsoft Research, Research Intern, Bangalore, India Jan 2017 - June 2017
· Enabled "whole-program analysis as a service" - built a scalable and reliable end-to-end system to statically analyze code and find bugs leveraging Static Module Verifier (SMV).
· Successfully ran on the Windows driver code base and found 350+ bugs - null pointers and use-after-free.

Amazon Development Centre, SDE Intern, Bangalore, India July 2016 - Dec 2016
· Created new features in the Automated Content Correction and Validation engine based on n-gram models.
· Implemented a part of the infrastructure for a feedback system to reduce manual intervention for data validation.

Microsoft Development Center, Summer Intern, Hyderabad, India May 2016 - July 2016
· Implemented a classifier to find new/missing restaurants in Bing leveraging query logs, achieved >90% accuracy.

PROJECTS/ASSIGNMENTS

Learning to walk using hierarchical reinforcement learning CMU — Spring 2019
· Implemented HRL model to make an ant solve mazes; added novel regularization methods for smoother learning.

***Not one, I learn many tasks* - Extended MT-DNN architecture** CMU — Spring 2019
· Developed MTL models on GLUE - broke SOTA for CoLA dataset by novel ensembling on pre-trained BERT.

LSTMemNet : Generic Approach for solving ____ in reading comprehension CMU — Fall 2018
· Implemented architecture leveraging LSTMs and memory networks; empirically better generic model than SOTA

Development of Deep learning models on Speech WSJ dataset CMU — Fall 2018
· Developed models for speech-to-text, phoneme prediction, speaker verification, speech frame classification tasks

Development of Machine Learning models from scratch CMU — Fall 2018
· Implemented decision trees, logistic regression, kNNs, K-means, neural networks and basic HMMs