Utkarsh Simha

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EDUCATION

University of California, San Diego *Sep 2016 – Expected March 2018*
M.S. in Computer Science & Engineering, 3.43/4

PES Institute of Technology *Aug 2012 – June 2016*
B.E. in Computer Science & Engineering, 8.76/10
Recipient of the Prof. MRD Merit Scholarship

RELEVANT EXPERIENCE

IBM Research, Research Summer Intern *Jun 2017 – Sep 2017*
Intern under the Automated Machine Learning and Data Science group *TJ Watson Research Center*
· Created a data collection pipeline to collect model meta-information from an automated data science service
· Working on performing meta-learning over the collected data to intelligently identify the right models for forming an ensemble, using multi-arm bandit algorithms and reinforcement learning

Citrix R&D, Software Engineering Intern *Jan 2016 – Jun 2016*
Interned at ShareConnect team in the SaaS division *Bangalore*
· Implemented a modern screen-sharing alternative for Windows, designed to replace legacy code
· Implemented various optimizations such as *tiling*, *caching*, *XOR masking* to improve performance
· Innovative introduction of XOR masking for screen-sharing improved compression of transmitted data

Carnegie Mellon University, Summer Research Intern *Jun 2015 – Aug 2015*
Interned at Language Technologies Institute under Prof. Bhiksha Raj and Prof. Rita Singh *Pittsburgh, PA*
· Implemented and trained Deep Neural Networks (DNN) to replace Gaussian Mixture Models in the CMU Sphinx speech recognition engine
· The DNNs were used to predict states of a Hidden Markov Model corresponding to a phoneme
· Applied pre-training and deep learning techniques to the model, producing 76% test accuracy on the AN4 dataset

KDE, Open source developer *Oct 2014 – Feb 2014*
Worked on KStars, as part of Season of KDE
· Implemented a user-interface using Qt to provide step-by-step instructions for navigating through star-hopping in KStars
· Resulting implementation has been deployed into the open-source codebase of KStars

PUBLICATIONS

Standards based Integration of Advanced Key Management Capabilities with Openstack IEEE CCEM
D. Sitaram, S. Harwalkar, S. Iyer, S. Jha, U. Simha *Nov 2015, Bangalore*

SELECTED PROJECT WORK

Dimensionality Estimation *Sep 2016 – present*
Working under Prof. Yoav Freund at UCSD
· Perform Spectral Embedding upon high dimensional data with noise to identify the low dimensional manifold
· Using distributed KMeans++ on Spark to identify intrinsic dimension of the low dimensional manifold

Enhancing Educational Video Viewing Experience *Jan – May 2016*
Worked under Dr. Om Deshmukh, Xerox Research Center India
· Investigated a variety of learning methods to automatically generate questions based on transcripts of video lectures
· Used a Part-of-Speech and Named-Entity-Recognition taggers along with ConceptNet, to automatically generate questions

GRADUATE EXPERIENCE

Graduate Teaching Assistant *Winter 2017*
CSE 253 - Neural Networks for Pattern Recognition

RELEVANT SKILLS

Languages	C++, Python, C, Java, Javascript, shell script
Libraries	TensorFlow, Theano, numpy, sklearn, Spark, C++ STL, C++ Boost, KDE, Qt, jQuery, Bootstrap
Domains	Deep Learning, Machine Learning, Artificial Intelligence, Natural Language Processing
MS Coursework	Probabilistic Reasoning & Decision Making, Learning Algorithms, Machine Learning Theory, Statistical NLP, Web mining and Recommender Systems, Convex Optimization
BE Coursework	Natural Language Processing, Big Data Analytics, Advanced C++, Advanced Algorithms