Sanket Lokegaonkar

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EDUCATION

Virginia Tech *2016 - Present*
Masters in Computer Science
Relevant Courses: Advanced Machine Learning, Advanced Computer Vision, Parallel Computation, Multiprocessor Programming, Data Mining: Large Networks

University of Mumbai: Rajiv Gandhi Institute of Technology *2011 - 2015*
Bachelors in Computer Engineering
Relevant Courses: Analysis of Algorithms & Design, Artificial Intelligence, Computer Vision, Distributed Systems, Computer Organization & Architecture.

TECHNICAL SKILLS

Programming Languages: Java , Python, C/C++, Javascript, MATLAB , SQL, LaTeX
Libraries: Tensorflow, Pytorch, Scikit-learn, NLTK, Spring Framework, Android, AngularJS, JQuery, Spring MVC, Django

EXPERIENCE

Research Assistant Spring 2017-Present
Computer Vision & Machine Learning Lab,Virginia Tech, Guide: Prof. Jia-Bin Huang

- Currently working on reducing catastrophic forgetting effects observed in deep-learning networks (Lifelong learning).
- Developed loop-back module for ensuring forward-backward consistency in object tracking for videos with Deep Siamese Network.

Research Assistant Summer 2017
Discovery Analytics Center/VTTI, Virginia Tech , Guide: Prof. Naren Ramakrishnan

- Developed a baseline classifier utilizing sensor data with SVM.
- Developed 2 video classifcation/prediction modules viz C3D(3D Convolutions) and Two-Stream CNNs in Tensorflow and Pytorch.
- Factored important features for detecting and predicting the drowsiness task.

Research & Development Intern Fall 2015 - Spring 2016
Indian Institute of Technology Bombay, Guide: Prof.Ganesh Ramakrishnan

- *Web and Mobile Development:* Contributed significantly to the development of web application and android application with the goal of aggregating and disseminating informational multimedia content (farming practices/ folklore) to local communities in Rural India. Technologies used: Java Spring MVC , AngularJS , JQuery, Android
- *Open-source:* Contributed to the development of open-source library for handling cloud telephony workflows.

PUBLICATIONS

Building Complementary Domain Taxonomies using Query Enrichment IIT Bombay
Simoni S. Shah, Shraddha Bhattad, Sanket Lokegaonkar, Ganesh Ramakrishnan

- In IJCAI: Workshop on Cognitive Knowledge Acquisition and Applications

SELECTED PROJECTS

Unsupervised Pixel-level Domain Adaptation for Semantic Segmentation Spring 2017

- We proposed a novel approach of solving domain adaptation for semantic segmentation by using Conditional GANs to transfer styles across domains and reduce domain-distribution mismatch.Code available in Pytorch

QBOne: A Virtual Environment for Improving Quarterback Decisionmaking Spring 2017

- Designed and developed quarterback training environment in a motion-tracked Virtual Reality for American Football using Unity Game Engine.

Deep Reinforcement Learning in Multi-agent Soccer Fall 2017

- We developed Deep Q-Network with Opponent Modeling for learning deep agents on half-field offense task in a multi-agent soccer environment.

Structural optimization for in-memory key-value stores Fall 2016

- Worked on 2 optimizations in Redis (popular key-value store), specifically Sorted Set and String key-value Hash-Map, replacing them with more compact and memory efficient Adaptive Radix Tree and Google's SparseHash.

libConvex Fall 2016

- Developed library for convex optimization methods in MATLAB.

Semantic Search on Distributed Databases Spring 2015

- Designed and developed a modular, fault-tolerant distributed search system supporting load distribution across nodes and dynamic management of nodes in Java. Supports "semantic" queries by using state-of-the-art NLP parsers from Stanford NLP.

Additional Experience & Workshops

Worked as instructor and TA for CS:3714 Mobile Software Development
Attended Machine Learning Summer School 2015 focusing on Convex/Non-convex Optimization, IIT Bombay, India.
Contributed in CS teaching workshops for children in Rural India