Sanket Lokegaonkar

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Education

Virginia Tech *2016 - Present*
Masters in Computer Science
Relevant Courses: Advanced Machine Learning, Advanced Computer Vision, Numerical Optimization , Virtual Environments

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

Experience

Research Assistant at *Discovery Analytics Center/VTTI* Summer 2017

Working on predicting driver state with dashboard cam video and sensors in collaboration with Virginia Tech Transportation Institute and Discovery Analytics Center.

Research Assistant at *Vision and Learning Lab* Spring 2017

- Currently working on improving the generalization capabilities of deep-learnt representations, for different domains using adversarial training
- Developed loop-back module for ensuring forward-backward consistency in Visual Object Tracking with Deep Siamese Network.

Research Intern at *Indian Institute of Technology Bombay* Fall 2015 - Spring 2016

- Developed framework for building and evolving a domain-specific taxonomy, given an initial set of well-organized data points curated from expert user.
- Developed lokavidya web application supporting informational content aggregation using video as primary media.
- Contributed in development of the state machine architecture design to interface cloud telephony systems.

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

Domain Adaptation Spring 2017

- Investigated the use of CycleGAN, a promising new architecture on the task of domain adaptation in segmentation and classification.

QBOne: A Virtual Environment for Improving Quarterback Decisionmaking Spring 2017

- Developed quarterback training environment in a motion-tracked Virtual Reality for American Football.
- Conducted an user study to answer questions on how prior experience with football affects the movement and decision-making in VE.

Deep Reinforcement Learning in Multi-agent Soccer Fall 2017

- Developed the initial prototype for learning deep agents on half-field offense task in a multi-agent soccer environment.
- Agents were trained on two environments: 6x9 grid and Robocup 2d Soccer environment.
- The underlying model for the agents is DQN with Opponent Modeling from He, He, et al. "Opponent Modeling in Deep Reinforcement Learning".

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

- Worked on 2 optimizations in Redis, specifically Sorted Set and String key-value Hash-Map, replacing them with more compact and memory efficient Adaptive Radix Tree and Google's SparseHash.
- Performed evaluations on the modifications and validated the increased memory utilization seen due to the changes.

libConvex Fall 2016

- Implemented algorithms on Line Search Methods, Trust-Region Methods, Conjugate Gradient, Quasi-Newton, Parameteric Least Squares, Sequential Quadratic Programming for equality constraints.

Additional Experience

Worked as instructor and TA for CS:3714 Mobile Software Development
Contributed in CS teaching workshops for children in Rural India
Developed web application assisting in transcription of educational videos for Spoken Tutorial Initiative.