Udit Saxena

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Education

University of Massachusetts, Amherst, MA — Sept 2016 – Present
MS in Computer Science, College of Information and Computer Sciences — GPA: 3.94
Coursework: Machine Learning, Adv. Natural Language Processing, Distributed OS, Systems for Data Science

Birla Institute of Technology and Science, Pilani, India — Aug 2010 – Aug 2015
BE (Hons.) in Computer Science, MSc (Hons.) in Mathematics

Work Experience

Sumo Logic, Redwood City, CA — May 2017 – Present
Backend Engineer Intern, Metrics Team

- Developing a Distributed Tracing pipeline, abstracting over AWS X-Ray, Zipkin and mining the generated traces to provide insights.

Sprinklr, Gurgaon, India — July 2015 – Aug 2016
Product Engineer, Core Team

- Spearheaded the development of a Single Sign On solution using OpenSAML for Sprinklr as an Identity Provider across multiple Sprinklr product lines. Developed REST-based API extensions to the Sprinklr core module.
- Engineered API integrations of social media platforms - Twitter, Under Armor Record, Wordpress - and enterprise solutions - SAP C4C, SAP Hybris - and increased social media platform coverage by 15% and streamlined the core audit module.

Adobe Systems, Bangalore, India — Jan 2015 – June 2015
Intern, User Analytics, Adobe Captivate

- Set up a pipeline to collect non-PII data on Captivate users, mine the user data and provide data driven insights for the team.

MLPACK, Google Summer of Code — May 2014 – Aug 2014
Summer Intern

- Developed Machine Learning algorithms for MLPACK - an open source machine learning library with over 1200 stars on Github and multiple citations - and been a core contributor since May 2014.
- Implemented Adaboost algorithms - Adaboost.M1, Adaboost.MH and Adaboost.SAMME algorithms with weak learning algorithms.

Research Experience

Serving Pre-trained Tensorflow models in Factorie, — Jan 2017 - May 2017
Mentor: Prof. Andrew McCallum — IESL,UMass Amherst

- Extended Factorie, an open source Scala framework for deploying probabilistic modeling to serve pre-trained Tensorflow models based on Named Entity Recognition using Iterated Dilated CNNs by using Tensorflow Java bindings.

AUSPICE: Global Name Service - A highly mobile internetwork , — Jan 2017 - May 2017
Mentor: Prof. Arun Venkatarami — UMass Amherst

- Worked on supporting and extending the GNS project's experimental setup - MobilityFirst. Worked with the team responsible for scaling up the system to support a campus wide deployment on UMass campus as a setup for emergency services.

Multivariate Time Series Analysis - Real Time Gesture Recognition, — Aug 2014 - Dec 2014
Mentor: Prof. Navneet Goyal — BITS Pilani

- Built a model to account for the real time factor of most human gestures as naturally occurring time series frame by frame, and recognize an early stopping criterion for faster recognition. Achieved a recognition rate of 93 percent on the AUSLAN (Australian Sign Language Dataset and a recognition rate of 91 percent on the Daily Sports and Activities Dataset.

Projects

Answering Reading Comprehension using Deep Learning: Implemented Dynamic Memory Networks and End-to-End Memory Networks and compared performances on the Facebook bAbI dataset across DMNs, Memory Networks, Recurrent Neural Networks using LSTMS and GRUs to answer questions based on the task of reading comprehension.

Generating descriptions of videos using RNNs: Using a sequence to sequence model to map input videos to output sentences which describe the video. The model extracts the features from frames of the video using a deep Convolutional Neural Network, encodes them and decodes them using a multi-layered RNN with LSTM units or GRUs.

Graph Analytics - PageRank: Implemented Google's PageRank algorithm on the Pregel graph analytics framework using the Bulk Synchronous Processing model to simulate large scale graphs and analyze results in a multi-threaded environment.

Wikipedia Vandalism detection bot: Given the task of detecting ill-intentioned edits, achieved an accuracy of 81% using SVMs and 79% using Naive Bayes Classifier.

Skills

- Java, Python, C++, Pytorch, MATLAB; Git, SVN; Linux; MongoDB, Elasticsearch, MySQL