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Anusha Balakrishnan

Education

Stanford University
M.S. Computer Science (expected June 2017)

Columbia College, Columbia University
B.A. Computer Science, with a concentration in Linguistics (December 2014) **GPA: 3.63/4.0**

Selected Coursework

Deep Learning for NLP, Deep Learning for Computer Vision, Deep Learning for Genomics and Biomedicine, Hacking for Diplomacy, Information Retrieval, Computational Molecular Biology, Machine Learning

Experience

Pinterest (June '16 - present)
Software Engineering Intern - Ads Ranking
- *Building a pipeline to experiment with and automatically determine optimal values for various thresholds in the ads pipeline and maximize ad revenue (increased ad search revenue by 4%).*

Apple, Inc. (Feb '15 - August '15)
Machine Learning & Data Scientist - Siri
- *Worked on domain classification of Siri requests using contextual features and knowledge bases.*
- *Developed models for semantic parsing of queries using conditional random fields (CRFs).*
- *Worked towards making these models production-ready at scale for Spotlight natural language search.*
- *Developed classification models to predict semantic completeness of Siri requests.*

Apple, Inc. (June '13 - August '13)
Siri Intern
- *Implemented machine learning based solutions to named entity disambiguation problems.*
- *Boosted system accuracy by more than 20%.*

Projects

Hacking Violent Extremism Online, Hacking for Diplomacy Class Project, collaboration with State Department (present)
Deep Neural Networks for Imputation of Functional Genomic Data, CS273B Class Project @ Stanford (present)
Recurrent and Convolutional Neural Networks for Understanding Music, CS224D Class Project @ Stanford
- *Implemented Recurrent and Convolutional Neural Network architectures to determine whether two songs are similar or not based on either their lyrics or their audio spectrograms.*

Convolutional Neural Networks for Outcome Classification in Sports, CS231N Class Project @ Stanford
- *Implemented and explored the performance of various Convolutional Neural Network (CNN) architectures on the task of play-by-play outcome classification for sports videos (specifically for cricket).*

Deep Learning for Dialogue Agents, Stanford University (September '15 - present)
Advisor: Dr. Percy Liang
- *Created a statistical natural language system (using neural networks) that understands and responds to commands to arrange blocks in a virtual block world.*
- *Currently working on deep learning models that can simulate agents in negotiation tasks.*

Sarcasm Detection on a Timeline, Columbia University (July '14 - Jan '15)
Advisor: Dr. Smaranda Muresan
- *Ran multiple experiments using Twitter data collected over several weeks to determine whether accuracy for a bag-of-words sarcasm classifier drops as test data moves further away in time from training data.*

WordsEye is a system that converts descriptive text into representative 3D images.
WordsEye Linguistics Tool (WELT), Columbia University (September '13 - Dec '14)
Advisors: Dr. Julia Hirschberg, Bob Coyne, Morgan Ulinski
- *Developed an interface to allow field linguists to formally document and model the grammar of a language.*
- *Trained incremental dependency parser models to facilitate documentation of syntax*

A Computational Approach to Cross-Domain Memorability, Class Project @ Columbia (Graduate NLP Seminar)
Advisor: Dr. Smaranda Muresan
- *Explored existing research to find and automatically extract features that influence memorability of text, and discovered means to computationally extract those features.*

Publications

Documenting Endangered Languages with the WordsEye Linguistics Tool. Morgan Ulinski, Anusha Balakrishnan, Daniel Bauer, Bob Coyne, Julia Hirschberg, Owen Rambow. *ACL 2014 Workshop on the Use of Computational Methods in the Study of Endangered Languages.*
WELT: Using Graphics Generation in Linguistic Fieldwork. Morgan Ulinski, Anusha Balakrishnan, Daniel Bauer, Bob Coyne, Julia Hirschberg, Owen Rambow. *ACL 2014 System Demonstration.*

Skills

Programming Languages *Java, Python, Go, Pig, C/C++, MATLAB, Lisp, PHP, HTML, CSS, JavaScript*
Machine Learning Packages *TensorFlow, Theano, Lasagne, LIBSVM, LIBLINEAR*
Distributed Computing *AWS, Hadoop, Hive*