Samridhi Shree Choudhary

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Education

Carnegie Mellon University   *Pittsburgh, USA*

MASTERS IN LANGUAGE TECHNOLOGIES   *August 2016 - August 2018*

- Advisor: Carolyn Penstein Rosé
- CGPA: 3.84/4
- Selected Coursework: Intro to Machine Learning, Algorithms for Natural Language Processing, Machine Translation, Computational Discourse Analysis, Deep Learning, Machine Learning for Large Datasets, Neural Nets for Natural Language Processing (ongoing), Computational Semantics (ongoing)

Vellore Institute of Technology   *Vellore, India*

BACHELOR OF TECHNOLOGY   *May 2008 - June 2012*

- Major: Computer Science and Engineering
- CGPA: 9.4/10

Research Experience

Language Technologies Institute (CMU)   *Pittsburgh, USA*

RESEARCH ASSISTANT (ADVISOR: CAROLYN PENSTEIN ROSÉ)   *August 2016 - PRESENT*

- Currently working on understanding the impact of coordination and developer conversation behaviors on project success in open-source communities on platforms like GitHub.
- Implemented and executed unsupervised Markov Models over project activity parameters to identify bursts in activity.
- Implemented and compared different segmentation models for time-series data to understand project activity bursts.
- Designed and implemented a novel way to quantify developer coordination in GitHub projects (work currently under review).

Alexa Prize Challenge 2017 (Team - CMUMagnus)   *Pittsburgh, USA*

OFFICIAL MEMBER (ADVISOR: ALAN BLACK AND CAROLYN PENSTEIN ROSÉ)   *November 2016 - August2017*

- Designed and implemented retrieval-based models for opinion-mining and finite-state models for dialog strategies for a multi-turn conversational agent.

Professional Experience

Microsoft   *Hyderabad, India*

SOFTWARE ENGINEER (CLOUD DATA AND APPLICATION PROTECTION)   *June 2012 - March 2016*

- Worked on the design, implementation and testing of major replication features of standalone and clustered virtual machines for enterprise servers.
- Designed and implemented automated Functional and UI Component Test Library, used by entire team.
- Mentored interns and new-recruits for independently owned modules.

Microsoft   *Hyderabad, India*

SOFTWARE ENGINEERING INTERN (WINDOWS SERVICEABILITY)   *May 2011 - July 2011*

- Built an automated fuzzing system that was used to fuzz the DNS Cache Interfaces of Windows Server and Client OS.

Technical Skills

Programming Languages ： C/C++ (Intermediate), Python (Intermediate), C# (Intermediate), Java (Beginner), Matlab/Octave (Beginner), R (Beginner)

Deep Learning Libraries ： PyTorch (Beginner), DyNet (Beginner)

Database and Indexing Technologies ： MongoDB (Intermediate), Lucene (Beginner)

Publications

Conference Paper ：Samridhi Choudhary, Christopher Bogart, Aaksha Meghawat, Carolyn Rosè, James D. Herbsleb. *Not Just Who But How: Reconsidering Coordination in Open-Source GitHub Projects*. Under Review at the International Conference of Software Engineering, ICSE 2018

Under Review

Conference Paper ：Shrimai Prabhumoye, Fadi Botros, Khyathi Chandu, Samridhi Choudhary, Esha Keni, Chaitanya Malaviya, Thomas Manzini, Rama Pasumarthi, Shivani Poddar, Abhilasha Ravichander, Zhou Yu, Alan Black. *Building CMU Magnus from User Feedback*. In Proceedings AWS re:INVENT, 2017

To Appear in AWS re:INVENT 2017

Workshop Paper ：Samridhi Choudhary, Shrimai Prabhumoye, Evangelia Spiliopoulou, Christopher Bogart, Carolyn Rose, Alan Black. *Linguistic Markers of Influence in Informal Interactions*. Second Workshop on NLP and Computational Social Science, ACL 2017

Vancouver, Canada

Workshop Paper ：Elizabeth K. Bowman, Matt Turek, Paul Tunison, Reid Porter, Steve Thomas, Vadas Gintautas, Peter Shargo, Jessica Lin, Qingzhe Li, Yifeng Gao, Xiaosheng Li, Ranjeev Mittu , Carolyn Penstein Rosé , Keith Maki, Chris Bogart, Samridhi Shree Choudhary. *Advanced text and video analytics for proactive decision making*. SPIE Defense+ Security, International Society for Optics and Photonics, 2017

California, USA

Projects

Towards Interpretable Multi-Task Learning in Language

LTI, CMU

Course Project Instructor: Ruslan Salakhutdinov

August 2017 - December 2017

- Implemented a two-level Bi-LSTM network jointly trained to predict the POS and NER tags for PennTreebank sentences.
- Implemented a novel gating technique in order to find the most important neurons for each task.
- Performed experiments to interpret the properties of the task-important neurons and studied their interactions.

OpinionBot: An Intelligent Conversational Agent for Opinion Mining

LTI, CMU

Advisor: Alan Black and Alexander I. Rudnicky

January 2017 - May 2017

- Scraped, cleaned and annotated the Washington Post Corpus with sentiment for opinion formulation.
- Implemented a retrieval model with *MMR Reranking* to fetch diverse opinions for a given query that were summarized into a coherent answer using *Extractive Summarization* with *TextRank*.
- Deployed the system as an Alexa Skill.

Understanding Structure in Open-Domain Dialog

LTI, CMU

Advisor: Graham Neubig and Alan Black

January 2017 - May 2017

- Implemented a sequence-to-sequence model with attention to understand the inherent structure of dialog responses for the Ubuntu Dialog Corpus.
- Defined the structure of a response by converting the dialogs into templates using their parse trees annotations that were learned using the encoder-decoder model.

Linguistic Markers of Influence in Informal Interactions

LTI, CMU

Advisor: Carolyn Penstein Rosé and Alan Black

January 2017 - May 2017

- Scraped and studied user posts from a social media platform to understand the effect of language on the influence of the post.
- Operationalized influence and annotated the posts accordingly, engineered indicative linguistic features for the content of the posts and ran regression models to study the improvement in classification of influential and non-influential posts.

Honors & Awards

2016-2018

Carnegie Mellon University, USA

- **Graduate Research Fellowship** - Covers tution, fees, conference travel and monthly stipend for the entire course duration.

2008-2012

VIT, India

- **Outgoing Awards and Gold Medal** - Awarded the *University Gold Medal*, *Best Outgoing Student* and *Ishan Goel Endowment Award* for excellent performance in Computer Science for my undergraduate course.
- **Annual University Scholarship** - Awarded university scholarship for securing Rank 1 in the Computer Science department each year through the 4-year course.