Dheeraj Rajagopal

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Education

Carnegie Mellon University

PHD IN LANGUAGE TECHNOLOGIES

- Advisor: Prof. Eduard Hovy
- Primary Interests: Deep Learning for NLP, Knowledge Representation and Reasoning, Question and Answering with Background Knowledge, Learning with Partial or Limited Knowledge

Carnegie Mellon University

MASTERS IN LANGUAGE TECHNOLOGIES (GPA: 3.71/4)

- Advisors: Prof. Eduard Hovy and Prof. Teruko Mitamura
- Research Fellowship for the entire course duration (Monthly Stipend + Full tuition Fee Waiver)
- Courses: Algorithms for NLP, Introduction to Machine Learning, Computational Semantics for NLP, Advanced Multimodal Machine
 Learning, Topics in Deep Learning, Deep Reinforcement Learning, Machine Translation and Sequence-to-Sequence Models, Language
 and Statistics

VIT University

BACHELORS IN COMPUTER SCIENCE AND ENGINEERING (GPA: 8.7/10)

• Recipient of Scholarship awarded from VIT University for ranking among top 10 in the state

Experience

Microsoft Research

GRADUATE RESEARCH INTERN WITH DR. MICHAEL GAMON

- Created a dataset for understanding the evolution of language of documents over time
- Developed a classification strategy for nature of edits in a document
- Implemented a model that predicts the nature of the edit with about 90% accuracy
- · Currently expanding the model as a semi-supervised approach to classify and summarize edits automatically

Institute for High Performance Computing-A*STAR

RESEARCH ENGINEER

- Implemented a fully functional Graph-Based Knowledge-Base system using Neo4j
- Built a system for unsupervised Knowledge Based tagging for Social Data
- Investigated different Knowledge Representations for commonsense reasoning in Artificial Intelligence Systems

National University of Singapore - Temasek Laboratories

Associate Scientist

- Research Area: Commonsense Reasoning and its Applications
- Developed tools for enabling commonsense reasoning in Natural Language Processing applications
- Built applications for Information Extraction, Topic Modeling and Document Categorization using Knowledge-bases
- Built the back-end for a game for extracting domain-specific commonsense knowledge (disaster relief and humanitarian response)

DHEERAL RAJAGOPAL · RÉSUMÉ

Technical Skills ____

- 1 **Programming Languages** : Python(Advanced), Java(Intermediate), C(Beginner)
- 2 **Deep Learning Libraries** : PyTorch, TensorFlow
- 3 Database Technologies : Neo4j, MySQL, SQLite
- 4 **Operating Systems** : OSX, Linux, Windows

Pittsburgh, Pennsylvania

Pittsburgh, Pennsylvania

September 2017 - Present

August 2015 - July 2017

Redmond, WA

May - August 2018

October 2012 - October 2014

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Singapore November 2014 - July 2015

Singapore

Vellore, India

August 2008 - May 2012

Selected Publications _

Papers

2019	Conference Paper : Rajagopal .D., Vyas .N., Siddhant .A., Rayasam .A., Tandon .N., Hovy .E.:	Honolulu, USA
	Domain Adaptation of SRL Systems for Biological Processes : Under Review, AAAI	
2018	Workshop Paper : Balachandran .V., Rajagopal .D., Catherine .R., Cohen .W.: Learning to Define	Brussels, Belgium
	Terms in the Software Domain. W-NUT, EMNLP	
2018	Conference Paper : Dhingra .B.*, Pruthi .D.*, Rajagopal .D.*: Simple and Effective	New Orleans, USA
	Semi-Supervised Question Answering. NAACL [* = Equal Contribution]	
2017	Conference Paper : Chaplot D.S, Sathyendra K.M, Pasumarthi R, Rajagopal D, Salakhutdinov R:	New Orleans, USA
	Gated-Attention Architectures for Task-Oriented Language Grounding. AAAI	
2016	Workshop Paper : Rajagopal, D., Hovy, E., & Mitamura, T. Unsupervised Coreference Resolution	Austin, USA
	for Abstract Events. Uphill Battles in Natural Language Processing, EMNLP	
2016	Conference Paper : Araki, J., Rajagopal, D., Sankaranarayanan, S., Holm, S., Yamakawa, Y.,	
	Mitamura, T. Generating Questions and Multiple-Choice Answers using Semantic Analysis of Texts.	Osaka, Japan
	COLING	
2014	Conference Paper : Cambria E., Olsher D., and Rajagopal D. SenticNet 3: A common and	Quebec City,
	common-sense knowledge base for cognition-driven sentiment analysis. AAAI: 1515-1521	Canada
2012	Conference Paper : Tandon N., Rajagopal D., and De Melo G. Markov Chains for Robust	Mumbai India
	Graph-Based Commonsense Information Extraction. COLING (Demos)	mumbai, maia
2013	Book Chapter : Cambria E., D. Rajagopal D Olsher D., and Das D. Big Social Data Analysis. In: R.	Taylor & Francis
	Akerkar (ed.) Big Data Computing, ch. 13	Publications

Projects

Retrofitting Knowledge Bases to Word Embeddings

TECHNOLOGIES USED: PYTHON

- Examined if we could retrofit the KB concepts based on individual relationships to word embeddings
- Observed that some relationships improved and some decreased in the Question and Answering scenario
- Studied the validity of the approach to intrinsically evaluate Knowledge Bases

Addressing Inaccuracies in Crowdsourced Common-Sense Knowledge Bases

TECHNOLOGIES USED: PYTHON

- We addressed the problem of compound words in the ConceptNet commonsense Knowledge base
- The new algorithms included naive string matching, POS based comparison and a novel approach using the N-gram model
- Our POS-Ngram approach achieved high precision and recall compared to other naive methods

Citation Classification and PageRank for research papers

TECHNOLOGIES USED: C++

- This project was aimed at extracting Citations from a huge set of research papers, classification by "Cue Phrases" and Page-Ranking the results using number of citations
- Citations were classified as Comparative, Base or citation based on previous work
- Won the 3rd Best Research Project award in the above mentioned program among 16 other teams all over India and the best project in the Data-Mining Track

Jan 2016 - April 2016

VIT, Vellore November 2011 - July 2012

IIIT, Hyderabad

December 2010