Meghana Moorthy Bhat

CONTACT INFORMATION

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INTERESTS

NLP, fairness and deep learning.

EDUCATION

Ohio State University, Columbus, OH, USA
Masters/Ph.D in Computer Science August 2019 - Present

University of Wisconsin-Madison, Madison, WI, USA
Master of Science, Computer Science Sep 2017 - May 2019
(CGPA: 3.6/4.0)

Sri Jayachamarajendra College of Engineering (SJCE), Mysore, India
Bachelor of Engineering (Honours), Computer Science Sep 2008 - Jun 2012
(CGPA: 9.21/10)

WORK AND RESEARCH EXPERIENCE

Research Intern, Microsoft Research, Redmond, WA (Remote)
Adviser: Saghar Hosseini, Ahmed Hassan Awadallah, Paul Bennett, Weisheng Li May 2020 - Aug 2020

- *Taxonomy:* Determining classes and hierarchies of toxic language beyond offensive language.
- *Data Collection:* Employing different techniques like weak supervision and self-training to address sparsity of toxic language in email conversations.
- *Ongoing:* Evaluation and analysis.

Research Intern, Mila, Montreal, QC
Adviser: Prof. Laurent Charlin June 2019 - Present

TPMS: Proposed methodology to assign reviewers for the submitted papers in conferences using Microsoft CMT.

- *Document Representation:* Studied auto-encoders, pre-trained models like BERT to represent documents.
- *Evaluation:* Explored clustering and supervised learning approaches inspired from Siamese networks.
- *Ongoing:* Investigating the relevance and fairness of our proposed models in understanding the expertise of reviewers.

Graduate Researcher, Ohio State University, OH, USA
Adviser: Prof. Srinivasan Parthasarathy Sep 2019 - Present

- Understanding robustness of fake news detectors by generating adversarial examples. (EMNLP 2020 Workshop on Negative Insights (To Appear))
- Achieving robustness to syntactic/grammatical vulnerabilities in neural fake news detectors. (Ongoing)

Graduate Researcher, UW-Madison, WI, USA
Adviser: Prof. Theodoros Rekatsinas Sep 2017 - Dec 2018

- Proposed algorithms to perform error detection and correction for structured data using deep learning (DL).
- Approximate discovery of Functional Dependencies (FDs) using structure learning
- Tested the accuracy of results against HoloClean for different noisy datasets.

Machine Learning Intern, Qualcomm, San Diego, CA, USA
Manager: Mark Charlebois June 2018 - Aug 2018

Worked on enabling 8-bit CPU (Fixed point math) in C++ for better performance in overall speed-up and lesser memory consumption for SNPE AI powered phones.

Intel Corporation, Bangalore, India
Design and Software Engineer (Infrastructure and performance modelling) Jul 2012 - Jul 2017

Papers and conferences

1. **Meghana Moorthy Bhat**, Srinivasan Parthasarathy. "How Effectively Can Machines Defend Against Machine-Generated Fake News? An Empirical Study." Workshop on Insights from Negative Results in NLP, EMNLP 2020 (To Appear).
2. **Meghana Moorthy Bhat**, Zhixuan Zhou "Fake News Detection via NLP methods becomes harder." Women in Machine Learning associated with NeurIPS 2019, Vancouver, BC, Canada (WiML).
3. **Meghana Moorthy Bhat**, Yogesh Chockalingam, Manjunath NS "DeepRepair:A framework for error detection and correction." Montreal AI Symposium 2019, Montreal, QC, Canada (MAIS).
4. Zhixuan Zhou, Huankang Guan, **Meghana Bhat** and Justin Hsu "Detecting Fake News with NLP: Challenges and Possible Directions." International Conference on Agents and Artificial Intelligence (ICAART) 2019.
5. **Meghana Moorthy Bhat**, Josef Eckmueller, Melwyn Scudder. "Performance Optimization of Virtual Prototypes." DTTC Intel, Portland, Oregon, USA 2015. (DTTC is Intel global internal conference)
6. **Meghana Moorthy Bhat**, Melwyn Scudder, Kartik Shah. "Virtual Prototype (VP) Quality Improvement Methodology." DvCon India, Bangalore, India, 2015.

Other Projects

Stance-based summarization of debates.
Ohio State University Sep 2020 - Present

Generating extractive summary of debates having discourse structure.

Entity Matching using Machine Learning and Deep Learning
UW-Madison (Course: Data Science, with Prof. AnHai Doan) Feb 2018 - Apr 2018

Performed entity matching of books from raw data of Amazon and GoodReads using Magellan and DeepMatcher. Performed benchmark analysis of both the approaches to understand the respective trade-offs. Code

Teaching Experience

Ohio State University, Columbus, OH, USA
Graduate Teaching Assistant Aug 2019 - Dec 2019

University of Wisconsin-Madison, Madison, WI, USA
Graduate Teaching Assistant Jan 2018 - May 2019

Skills

Languages - Python, Java, C, C++, shell, LATEX

Databases - SQL

Tools & Services - PyTorch, Keras, sklearn, spacy, numpy, Git, Azure, AWS, Slurm

Coursework

Data Structures and Algorithms, Data Management for Machine Learning Applications, Databases and Management Systems, Topics in Security, Data Science, Machine Learning, Artificial Intelligence, Natural Language Processing (NLP), Data Visualization.

Honours and Achievements

NSF Student Travel Grant to attend WiML co-located with NeurIPS 2019.

Student Travel Award to attend NeurIPS 2019.

Qualcomm Hackathon Finalist - Award for Innovation, 2018.

Application development award from US Ignite for SAFER Home project.

Department Recognition Award, Intel Corporation for successful critical project completion, 2015.

Employee Recognition Award, Intel Corporation for acceptance of poster presentation in DvCon India, 2015.

Conferral of the Honours degree in CSE, SJCE Mysore, 2012 (Requires minimum of 8.5 CGPA throughout the last two years of undergraduate studies).

State Board Merit Scholarship, Karnataka Secondary Education Examination Board (KSEEB) India, for 4 years of undergraduate study covering 75% of undergraduate tuition fee, 2008-2012.

Ranked All India 780 out of 400,000 candidates in Common Entrance Test, 2008.

Extracurricular Activities

Reviewer: KDD TrueFact Workshop 2020

WiML Workshop (2019) volunteer.

Carnatic classical vocalist - Performed over 300+ concerts across India and USA. Audio

Volunteered for Linux Club and SJCE music club during undergraduate studies to organize tech talks and events.