Dheeraj Mekala

Computer Science & Engineering University of California, San Diego, CA USA 92092

EDUCATION _

University of California, San Diego

2019 - present

MS in Computer Science Advisor: Prof. Jingbo Shang

Indian Institute of Technology Kanpur

2013 - 2017

B. Tech in Computer Science and Engineering

Publications _

Preprints

* - equal contribution

- 1. News Meets Microblog: A Retriever-Generator Hashtag Annotation Framework Xiuwen Zheng, Dheeraj Mekala, Amarnath Gupta, Jingbo Shang (under review), 2020.
- 2. Bayes-optimal Hierarchical Classification over Asymmetric Tree-Distance Loss Dheeraj Mekala, Vivek Gupta, Purushottam Kar and Harish Karnick. arXiv:1802.06771, 2018.

Conference Publications

3. META: Metadata-Empowered Weak Supervision for Text Classification.

Dheeraj Mekala, Xinyang Zhang, Jingbo Shang

Conference on Empirical Methods in Natural Language Processing (EMNLP), 2020 (Virtual Talk).

4. Contextualized Weak Supervision for Text Classification.

Dheeraj Mekala, Jingbo Shang

Association for Computational Linguistics (ACL), 2020 (Virtual Talk).

5. User bias removal in review score prediction.

Rahul Wadbude*, Vivek Gupta*, **Dheeraj Mekala**, Harish Karnick.

ACM India Joint International Conference on Data Science and Management of Data (CODS/COMAD) 2018.

SCDV: Sparse Composite Document Vectors using soft clustering over distributional representations.

Dheeraj Mekala*, Vivek Gupta*, Bhargavi Paranjape, Harish Karnick.

Conference on Empirical Methods in Natural Language Processing (EMNLP), 2017 (Long Oral).

Work Experience _

Sprinklr India Pvt. Ltd.

Apr 2018 - Jul 2019

Data Scientist, Machine Learning Team

- Architected and built Sprinklr AI's visual insights module, being used by over 1200 Sprinklr clients.
- Developed in-house computer vision models for visual sentiment, gender, age, and inappropriate content detection.
- Built a scalable system capable of running models over 500 million messages per day using Kafka and Elasticsearch.
- Developed a dockerized auto-scaling framework which is deployed in kubernetes for image classification.

Sprinklr India Pvt. Ltd.

Jul 2017 - Apr 2018

Product Engineer, Paid Advertising Team

- Developed a centralized monitoring environment which gathers system metrics as well as docker run-time metrics.
- Developed an end-to-end pipeline that incorporated DoubleClick tracking in ads.
- Implemented core functionalities to improve the feature of importing, exporting ads.

Microsoft India

May 2016 - Jul 2016

Machine Learning Intern

- Built case routing system in Microsoft Dynamics CRM, which predicts the ideal assignment candidate for a case.
- Built a robust pipeline which connects Microsoft Dynamics CRM and Azure Machine Learning studio.

ASnTech Engineering Services

Software Engineering Intern

- Designed an algorithm to speed up search queries related to the location of the vehicle, from 120 sec to 5 sec.
- Designed an algorithm that dynamically analyses accelerometer data of a moving vehicle to identify outliers and driving style of the driver.

SELECTED ACADEMIC PROJECTS _

Learning Symbolic Music Representation | \mathbf{O} | $\mathbf{\triangle}$

Mar 2020 - June 2020

Dec 2015 - Jan 2015

Deep Learning for Sequences, Prof. David Kriegman, UCSD

- Designed rhythm-conditioned autoencoder model which generates embeddings of polyphonic multi-track music.
- Successfully reconstructed the music while preserving the rhythm of each track.

Acute Kidney Injury(AKI) Prediction in ICU Patients $\mid \square$

Sept 2019 - Dec 2019

Introduction to Biomedical NLP, Prof. Michael Hogarth, Prof. Shamim Nemati, UCSD

- Constructed a risk prediction model to detect AKI in the first 72 hours of admission to the ICU using MIMIC-III dataset.
- This work shows that early risk prediction of AKI can be achieved in critically ill patients by utilizing structured clinical observations and clinical progress notes.

Portmanteau Generation | 🖸 | 💆 | 🗣 Best Project Award.

Sept 2019 - Dec 2019

Statistical Natural Language Processing, Prof. Ndapa Nakashole, UCSD

- Converted text generation task into sequence labelling task by incorporating structural constraints.
- Designed BiLSTM-Regression ensemble model to generate portmanteaus and outperformed existing techniques.

Bayes-optimal Hierarchical Classification over Asymmetric Tree-Distance Loss | O | Dec 2016 - May 2017

Undergraduate Research Project, Prof. Purushottam Kar, Prof. Harish Karnick, IITK

- Designed O(nlog(n)) algorithm to find Bayes optimal hierarchical classification over asymmetric and symmetric loss.
- Designed O(log(n)) algorithm to find Bayes optimal hierarchical classification over asymmetric loss under established logical assumptions.

Object Recognition in Surveillance Videos | 🖺

Dec 2015 - May 2016

Machine Learning Tools and Techniques, Prof. Harish Karnick, IITK

- Extracted relevant frames from camera feed to reduce space required for data storage and identified moving objects(ROI).
- Researched techniques for feature extraction, background subtraction and experimented with multiple classifiers.

Selected Awards and Honors _____

• Best Project Award in Graduate-level Statistical Natural language processing course.	2019
\bullet Ranked in Top 0.5% in JEE Advanced (IIT-JEE) 2013 among 150,000 candidates	2013
\bullet Ranked in top 0.2% in Jee Mains-BTech 2013 among 1,400,000 candidates	2013
\bullet Bronze Medal and Certificate of Merit (top 15 in India) for National Science Olympiad '13	2013
• Awarded KVPY Fellowship from Government of India.	2012

PROFESSIONAL RESPONSIBILITIES

- Program Committee Member: AAAI 2021
- Graduate Teaching Assistantship Dept. of Computer Science and Engineering, UCSD

Graduate Teaching Treatment Dept. of Computer Science and Engineering, Cost	
- Advanced Data-Driven Text Mining - Prof. Jingbo Shang	Fall 2020
- TA Lead on Remote Teaching	$Summer\ 2020$
- Mathematics for Algorithms and Systems Analysis - Prof. Oliver Braun	$Summer\ 2020$
- Introduction to Data Mining - Prof. Jingbo Shang	$Spring\ 2020$
– Introduction to Programming in Java - Prof. Adalbert Gerald Soosai Raj	$Winter\ 2020$
\bullet $Regional\ Academic\ Mentor$ - Dept. of Computer Science and Engineering, IIT Kanpur	2014 - 2015
• Student Guide - IIT Kanpur	2014 - 2015