Deepak Nathani

dnathani@ucsb.edu
deepak-nathani
deepakn97

About Me

I am a 2nd year Ph.D Student at *University of California, Santa Barbara*, advised by Dr. William Yang Wang. My research interests revolve around Natural Language Reasoning, Augmented Language Models, and Generating Automated Feedback.

Education

2022–Present **PhD, Computer Science**
University of California Santa Barbara
Advisor: Dr. William Yang Wang.

2015–2019 **B.Tech, Mechanical Engineering**
Indian Institute of Technology Hyderabad.

2017–2019 **B.Tech, Computer Science and Engineering (Second Major)**
Indian Institute of Technology Hyderabad
Advisor: Dr. Manohar Kaul.

Publications

Selected Publications

[1] **Deepak Nathani**, David Wang, Liangming Pan, and William Yang Wang. Maf: Multi-aspect feedback for improving reasoning in large language models. EMNLP, 2023.

[2] **Deepak Nathani**, Jatin Chauhan, Charu Sharma, and Manohar Kaul. Learning attention-based embeddings for relation prediction in knowledge graphs. In *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics*. Association for Computational Linguistics, 2019.

Other Publications

[3] Madhurima Vardhan, Narayan Hegde, **Deepak Nathani**, Emily Rosenzweig, Alan Karthikesalingam, and Martin Seneviratne. Infusing behavior science into large language models for activity coaching. *medRxiv*, 2023.

[4] Liangming Pan, Michael Saxon, Wenda Xu, **Deepak Nathani**, Xinyi Wang, and William Yang Wang. Automatically correcting large language models: Surveying the landscape of diverse self-correction strategies, 2023.

[5] Madhurima Vardhan, Narayan Hegde, Srujana Merugu, Shantanu Prabhat, **Deepak Nathani**, Martin Seneviratne, Nur Muhammad, Pranay Reddy, Sriram Lakshminarasimhan, Rahul Singh, Karina Lorenzana, Eshan Motwani, Partha Talukdar, and Aravindan Raghuveer. Walking with pace - personalized and automated coaching

engine. In *Proceedings of the 30th ACM Conference on User Modeling, Adaptation and Personalization*, UMAP '22. Association for Computing Machinery, 2022.

[6] Kalpesh Krishna, **Deepak Nathani**, Xavier Garcia, Bidisha Samanta, and Partha Talukdar. Few-shot controllable style transfer for low-resource multilingual settings. In *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics*. Association for Computational Linguistics, May 2022.

[7] Jatin Chauhan, **Deepak Nathani**, and Manohar Kaul. Few-shot learning on graphs via super-classes based on graph spectral measures. In *International Conference on Learning Representations*, 2020.

[8] Sumit Bhatia, Bapi Chatterjee, **Deepak Nathani**, and Manohar Kaul. A persistent homology perspective to the link prediction problem. In *Complex Networks and Their Applications VIII*, 2020.

[9] Charu Sharma, **Deepak Nathani**, and Manohar Kaul. Solving partial assignment problems using random clique complexes. In *Proceedings of the 35th International Conference on Machine Learning, ICML 2018*, 2018.

Professional Experience

2023-2023 **Applied Scientist Intern**, *AWS Translate*, New York
Advisors: Xing Niu, Shuoyang Ding, Prashant Mathur
Worked on improving the stability of Text2Text Simultaneous Translation systems.

2020–2022 **Pre-Doctoral Researcher**, *Google Research India*, Bengaluru
Advisor: Dr. Partha Talukdar
Worked towards creating a Conversational Health Assistant and improving Text Style Transfer models.

2019–2020 **Software Engineering AMTS**, *Salesforce.com*, Hyderabad

2018–2018 **Summer Research Intern**, *IBM Research Labs*, New Delhi
Advisor: Dr. Sumit Bhatia, Dr. Bapi Chatterjee
Used Persistent Homology to learn shape and structure of the neighborhood of a data item(node) and predict further links.

Awards & Scholarships

2022 **Academic Excellence Fellowship**, *University of California*, Santa Barbara

Academic Service

Reviewer SoCal NLP 2022, ICLR 2021-2023, NeurIPS 2021, EMNLP 2021
Sub-Reviewer NeurIPS 2020

Technical Skills

Programming C, C++, Python, MATLAB/Octave
Framework Tensorflow, PyTorch, Scikit-Learn

Miscellaneous

2017-2019 Coordinator, Infero - Programming Club, IIT Hyderabad

2018 Rank 30/250 teams, ACM-ICPC Amritapuri Regional