

Anvesh Rao Vijjini

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Research Interests

Broadly interested in Alignment, Fairness, Social Bias, Safety, Personalization, and Computational Social Science, within AI and NLP.

Education

- 2021 - present **PhD in Computer Science**,
University of North Carolina at Chapel Hill.
Advisor: Dr. Snigdha Chaturvedi
- 2017 - 2018 **MS in Computational Linguistics**,
International Institute of Information Technology, Hyderabad.
Advisor: Dr. Radhika Mamidi
- 2013 - 2017 **B.Tech in Computer Science**,
International Institute of Information Technology, Hyderabad.
Awarded Dean's List for being in the top 10% of the class in academics for Monsoon 2015 and Spring 2016 semesters.

Experience

- May 2024 - July 2024 **Research Intern at Bloomberg**.
Worked on extracting universal entity representations from large language models.
- Explored how large language models inherently encode rich entity representations in-context. Without any entity-specific fine-tuning, entity representations extracted from decoder-based LLMs can be applied to tasks such as entity linking, entity typing, slot filling, and question answering by leveraging ranking and clustering with embeddings.
- May 2023 - July 2023 **Research Intern at Bloomberg**.
Worked on document expansion with large language models for improving document retrieval
- Improving document retrieval by using large language models to generate and integrate a diverse set of questions into documents (document expansion), enriching content for improved search results.
- May 2022 - July 2022 **Research Intern at Adobe**.
Worked on transcript segmentation at Project Blink, Adobe's video sharing platform.
- Proposed a pretraining strategy that improves transcript segmentation by training in a curated order, with samples arranged in increasing similarity. Published our work at EACL 2023 (Findings)

August 2018 - **Lead Engineer (Research) at Samsung R&D Institute India.**

August 2021 Worked at Bixby Intelligence, Samsung's voice assistant.

- Automated WER Prediction of Bixby's ASR.
- Automated Conversation Quality Estimation for the performance evaluation of Bixby conversations.
- Data Augmentation to eschew manual annotations.
- Authored research papers based on Text classification and Domain Adaptation at EMNLP 2019, CICLing 2019, NLDB 2019, NLDB 2020, ICPR 2020 and EACL 2021.

Spring **Teaching Assistant**, *Natural Language Application*.

2017 The course covers popular Machine Translation (statistical) methods at the time such as IBM Models, Phrase-Based Models, and Neural Machine Translation.

Monsoon **Teaching Assistant**, *Natural Language Processing*.

2016 and 2017 An overview of various areas in NLP such as Tokenization, Parts Of Speech tagging, Natural Language Generation and Parsing.

Volunteer

- Reviewer for ACL 2020, EMNLP 2020, NLP+CSS @ EMNLP 2020, EACL 2021, ACL 2021, EMNLP 2022, NAACL 2023, EACL 2023, ACL 2023, WNU @ EMNLP 2024
- Student Volunteer for EACL 2023
- Sessions Chair for NLDB 2020
- Board member for STEM Pride of the Triangle (stempride.web.unc.edu)

Conference Publications

October 2024 **Exploring Safety-Utility Trade-Offs in Personalized Language Models**, *Anvesh Rao Vijjini**, *Somnath Basu Roy Chowdhury*, and *Snigdha Chaturvedi*.
under review

June 2024 **SocialGaze: Improving the Integration of Human Social Norms in Large Language Models**, *Anvesh Rao Vijjini*, *Rakesh Menon*, *Jiyai Fu*, *Shashank Shrivastava* and *Snigdha Chaturvedi*.
EMNLP 2024 (Findings)

October 2023 **PARROT: Zero-Shot Narrative Reading Comprehension via Parallel Reading**, *Chao Zhao*, *Anvesh Rao Vijjini*, and *Snigdha Chaturvedi*.
EMNLP 2023 (Findings).

January 2023 **Curricular Next Conversation Prediction Pretraining for Transcript Segmentation**, *Anvesh Rao Vijjini*, *Hanieh Deilamsalehy*, *Franck Dernoncourt* and *Snigdha Chaturvedi*.
EACL 2023 (Findings).

October 2022 **Towards Inter-character Relationship-driven Story Generation**, *Anvesh Rao Vijjini*, *Faeze Brahman* and *Snigdha Chaturvedi*.
EMNLP 2022.

April 2021 **WER-BERT: Automatic WER Estimation with BERT in a Balanced Ordinal Classification Paradigm**, *Anvesh Rao Vijjini**, *Akshay Krishna Sheshadri** and *Sukhdeep Kharbanda*.
EACL 2021.

- January 2021 **Sequential Domain Adaptation through Elastic Weight Consolidation for Sentiment Analysis**, *Avinash Madasu and Anvesh Rao Vijjini*.
ICPR 2020
- June 2020 **A SentiWordNet Strategy for Curriculum Learning in Sentiment Analysis**, *Anvesh Rao Vijjini**, *Kaveri Anuranjana** and *Radhika Mamidi*.
NLDB 2020
- June 2020 **A Position Aware Decay Weighted Network For Aspect Based Sentiment Analysis**, *Avinash Madasu and Anvesh Rao Vijjini*.
NLDB 2020
- November 2019 **Sequential Learning of Convolutional Features for Effective Text Classification**, *Avinash Madasu and Anvesh Rao Vijjini*.
EMNLP-IJCNLP 2019
- June 2019 **Gated Convolutional Neural Networks for Domain Adaptation**, *Avinash Madasu and Anvesh Rao Vijjini*.
NLDB 2019
- April 2019 **HindiRC: A Dataset for Reading Comprehension in Hindi**, *Anvesh Rao Vijjini**, *Kaveri Anuranjana** and *Radhika Mamidi*.
CICLing 2019
- April 2019 **Effectiveness of Self Normalizing Neural Networks for Text Classification** , *Avinash Madasu and Anvesh Rao Vijjini*.
CICLing 2019
- August 2018 **Twitter corpus of Resource-Scarce Languages for Sentiment Analysis and Multilingual Emoji Prediction**, *Narendra Choudhary, Rajat Singh, Anvesh Rao Vijjini* and *Manish Shrivastava*.
COLING 2018

Workshop Publications

- April 2021 **Analyzing Curriculum Learning for Sentiment Analysis along Task Difficulty, Pacing and Visualization Axes**, *Anvesh Rao Vijjini**, *Kaveri Anuranjana** and *Radhika Mamidi*.
Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis (WASSA) at EACL 2021.
- August 2019 **Hindi Question Generation Using Dependency Structures**, *Anvesh Rao Vijjini**, *Kaveri Anuranjana** and *Radhika Mamidi*.
Workshop on Humanizing AI (HAI) at IJCAI 2019.
- August 2018 **Towards Enhancing Lexical Resource and Using Sense-annotations of On-toSenseNet for Sentiment Analysis**, *Sreekavitha Parupalli, Anvesh Rao Vijjini* and *Radhika Mamidi*.
Workshop on Semantic Deep Learning (SemDeep-3) at COLING 2018.

Theses

- MS Theses **Towards Adapting Curriculum Learning for Sentiment Analysis: Challenges and Analyses** , *Anvesh Rao Vijjini* and *Radhika Mamidi*.