Anvesh Rao Vijjini

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Education

2013 - 2021   **B.Tech in Computer Science and MS in Computational Linguistics**,
International Institute of Information Technology, Hyderabad,
CGPA: 8.36.
Advisor: Dr. Radhika Mamidi, Language Technologies Research Center (LTRC)

Experience

August 2018 - Present   **Lead Engineer (Research) at Samsung R&D Institute India-Bangalore**.
Working in the Analytics Team of Bixby, Samsung's voice assistant.

- Next Utterance Recommendation Project. Recommending users new capabilities of Bixby based on currently spoken utterance to drive dynamic conversations.
- Automated Feedback Prediction. For performance evaluation of Bixby conversations, we implemented an automated feedback prediction system based on state-of-the-art text classification algorithms.
- Data Augmentation to eschew manual annotations. Feedback Prediction relies heavily on laborious tagging. Worked on retaining performance on feedback prediction with much lesser labeled data by utilizing ideas from Domain Adaptation and Semi-Supervised learning.
- Authored research papers based on Text classification and Domain Adaptation at EMNLP 2019, CICLing 2019, NLDB 2019, NLDB 2020 and ICPR 2020.

Spring 2017   **Teaching Assistant**, *Natural Language Application*.
The course covers popular Machine Translation (statistical) methods at the time such as IBM Models, Phrase Based Model and Neural Machine Translation.

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

Achievements

Dean's List - For being the top 10% of the class in academics:
- Monsoon 2015
- Spring 2016

Volunteer

- Reviewer for **ACL 2020, EMNLP 2020, NLP+CSS @ EMNLP 2020, EACL 2021, ACL 2021**.
- Sessions Chair for **NLDB 2020**

Submitted Manuscripts

October 2020 **A Syntax Aware BERT Based Approach for Identifying Well-Formed Queries in a Curriculum Framework**, *Avinash Madasu and **Vijjini Anvesh Rao***.
Under review at EACL 2021.

October 2020 **WER-BERT: Automatic WER Estimation for speech recognition with BERT**, ***Vijjini Anvesh Rao⋆ and Akshay Krishna Sheshadri⋆***.
Under review at ICASSP 2021.

October 2020 **Analyzing Curriculum Learning along Task Difficulty, Pacing and Visualization Axes**, ***Vijjini Anvesh Rao⋆**, Kaveri Anuranjana⋆ and Radhika Mamidi*.
Under review at EACL 2021.

Conference Publications

January 2021 **Sequential Domain Adaptation through Elastic Weight Consolidation for Sentiment Analysis**, *Avinash Madasu and **Vijjini Anvesh Rao***.
ICPR 2020

June 2020 **A SentiWordNet Strategy for Curriculum Learning in Sentiment Analysis**, ***Vijjini Anvesh Rao⋆**, Kaveri Anuranjana⋆ and Radhika Mamidi*.
NLDB 2020

June 2020 **A Position Aware Decay Weighted Network For Aspect Based Sentiment Analysis**, *Avinash Madasu and **Vijjini Anvesh Rao***.
NLDB 2020

November 2019 **Sequential Learning of Convolutional Features for Effective Text Classification**, *Avinash Madasu and **Vijjini Anvesh Rao***.
EMNLP-IJCNLP 2019

June 2019 **Gated Convolutional Neural Networks for Domain Adaptation**, *Avinash Madasu and **Vijjini Anvesh Rao***.
NLDB 2019

April 2019 **HindiRC: A Dataset for Reading Comprehension in Hindi**, ***Vijjini Anvesh Rao⋆**, Kaveri Anuranjana⋆ and Radhika Mamidi*.
CICLing 2019

April 2019 **Effectiveness of Self Normalizing Neural Networks for Text Classification** , *Avinash Madasu and **Vijjini Anvesh Rao***.
CICLing 2019

August 2018 **Twitter corpus of Resource-Scarce Languages for Sentiment Analysis and Multilingual Emoji Prediction**, *Nurendra Choudhary, Rajat Singh, **Vijjini Anvesh Rao** and Manish Shrivastava*.
COLING 2018

Workshop Publications

August 2019 **Hindi Question Generation Using Dependency Structures**, ***Vijjini Anvesh Rao⋆**, 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,* ***Vijjini Anvesh Rao*** *and Radhika Mamidi.* Workshop on Semantic Deep Learning (SemDeep-3) at COLING 2018.
July 2018	**BCSAT: A Benchmark Corpus for Sentiment Analysis in Telugu Using Word-level Annotations**, *Sreekavitha Parupalli,* ***Vijjini Anvesh Rao*** *and Radhika Mamidi.* Student Research Workshop (SRW) at ACL 2018.
July 2018	**Towards Automation of Sense-type Identification of Verbs in OntoSenseNet**, *Sreekavitha Parupalli,* ***Vijjini Anvesh Rao*** *and Radhika Mamidi.* Workshop on Natural Language Processing for Social Media (SocialNLP) at ACL 2018.

Course Projects

Spring 2017	**Hidden Markov Model Based Parts of Speech Tagging**. Parts of Speech Tagging is a Sequence Labeling Problem that can be solved through a single order HMM in which, at each point in the sentence, system predicts the tag based on previous tags and current word.
Monsoon 2017	**Author Verification**. Various classifiers along with a diverse linguistic feature set, used to characterize Authors' writing styles. The Author Verification system tells whether given two documents are penned by the same author or not.
Spring 2016	**Wikipedia Search Engine**. Python based project to index terms and optimize search queries on a large Wikipedia dump.
Spring 2016	**Wikipedia Documents Classification Engine**. Given a Wikipedia Document our system classifies it into multiple Categories it may belong to, using classification engines and embedding based features.
Spring 2015	**AI bot on 9x9 Ultimate Tic Tac Toe**. Using Alpha Beta Pruning on Min-Max Tree along with some heuristics. Our system predicts the best response move to the users move on an Ultimate Tic Tac Toe board.

Relevant Courses

Discrete Mathematics, Statistical Methods in Artificial Intelligence, Machine Learning, Artificial Intelligence, Natural Language Processing, Natural Language Applications (Statistical Machine Translation), Information Retrieval and Extraction, Topics in Information Retrieval, Introduction to Linguistics, Linguistics I: Language and Society, Linguistics II: Language Typology and Universals, Computational Linguistics, Topics in Discourse Analysis, Complexity and Advanced Algorithms.

Skill set

Programming Languages	C, Python
Libraries	Pytorch, Keras, Sklearn
Other skills	MATLAB, AMPL