

ATULA TEJASWI NEERKAJE

Email ◊ LinkedIn ◊ GitHub ◊ Google Scholar ◊ Personal Website

EDUCATION

University of Texas at Austin

M.S. in Computer Science, CGPA: 3.87/4.00

Austin, TX

Aug 2023 - Present

Manipal Institute of Technology

Bachelor of Technology (B.Tech) in Computer Science and Engineering, CGPA: 9.49/10

Manipal, India

June 2019 - July 2023

PUBLICATIONS

* indicates equal contribution.

- **Atula Tejaswi***, Nilesh Gupta*, Eunsol Choi. *Exploring Design Choices for Building Language-Specific LLMs. EMNLP 2024 (Findings)*. [Paper] [Code]
- Vijay Lingam*, **Atula Tejaswi***, Aditya Vavre*, Aneesh Shetty*, Gautham Krishna Gudur*, Joydeep Ghosh, Alex Dimakis, Eunsol Choi, Aleksandar Bojchevski, Sujay Sanghavi. *SVFT: Parameter-Efficient Fine-Tuning with Singular Vectors. NeurIPS 2024*. [Paper] [Code]
- Victor Petrén Bach Hansen*, **Atula Tejaswi***, Ramit Sawhney, Lucie Flek, Anders Søgaard. *The Impact of Differential Privacy on Group Disparity Mitigation. NAACL 2024 (Findings)*. [Paper] [Code]
- Ritesh Soun, **Atula Tejaswi**, Ramit Sawhney, Nikolaos Aletras, Preslav Nakov. *RISE: Robust Early-exiting Internal Classifiers for Suicide Risk Evaluation. LREC COLING 2024*. [Paper]
- Samyak Jain*, Parth Chhabra*, **Atula Tejaswi***, Puneet Mathur, Ramit Sawhney, Shivam Agarwal, Preslav Nakov, Sudheer Chava, Dinesh Manocha. *Saliency-Aware Interpolative Augmentation for Multimodal Financial Prediction. LREC COLING 2024*. [Paper]
- Sunny Sanyal*, **Atula Tejaswi***, Jean Kaddour, Abhishek Kumar, Sujay Sanghavi. *Early Weight Averaging meets High Learning Rates for LLM Pre-training. COLM 2024*. [Paper]
- Parth Chhabra*, **Atula Tejaswi***, Shivam Agarwal, Ramit Sawhney, Megh Thakkar, Preslav Nakov, Sudheer Chava. *Learning Through Interpolative Augmentation of Dynamic Curvature Spaces. SIGIR 2023*. [Paper]
- Ramit Sawhney*, **Atula Tejaswi***, Ivan Habernal, Lucie Flek. *How Much User Context Do We Need? Privacy by Design in Mental Health NLP Applications. ICWSM 2023*. [Paper]
- Ramit Sawhney, Megh Thakkar, Ritesh Soun, **Atula Tejaswi**, Vasu Sharma, Dipanwita Guhathakurta, Sudheer Chava. *Tweet Based Reach Aware Temporal Attention Network for NFT Valuation. EMNLP 2022 (Findings)*. [Paper] [Code]
- Puneet Mathur, **Atula Tejaswi**, Malika Chhibber, Ramit Sawhney, Fu-Ming Guo, Franck Deroncourt, Sanghamitra Dutta, Dinesh Manocha. *MONOPOLY: Financial Prediction from MONetary POLicY Conference Videos Using Multimodal Cues. ACM Multimedia 2022*. [Paper] [Code]
- Ramit Sawhney*, Shivam Agarwal*, **Atula Tejaswi***, Nikolaos Aletras, Preslav Nakov, Lucie Flek. *Towards Suicide Ideation Detection Through Online Conversational Context. SIGIR 2022*. [Paper] [Code]
- Ramit Sawhney*, Shivam Agarwal*, **Atula Tejaswi***, Kapil Pathak*. *Orthogonal Multi-Manifold Enriching of Directed Networks. AISTATS 2022*. [Paper] [Code]
- Ramit Sawhney*, **Atula Tejaswi***, Manas Gaur. *A Risk-Averse Mechanism for Suicidality Assessment on Social Media. ACL 2022*. [Paper]
- Ramit Sawhney, **Atula Tejaswi**. *Intermix: An Interference-Based Data Augmentation and Regularization Technique for Automatic Deep Sound Classification. ICASSP 2022*. [Paper] [Code]

EXPERIENCE

Teaching Assistant Aug 2024 - Present
UT Austin *Austin, TX*
Designing new modules for ECE 461P - Data Science Principles taught by Prof. Sujay Sanghavi and Prof. Constantine Caramanis

Research Assistant Aug 2023 - Aug 2024
UT Austin *Austin, TX*
Advised by Prof. Eunsol Choi. Worked on multilingual adaptation of Large Language Models and Retriever/Embedding Models.

Research Intern Jan 2023 - Jun 2023
Indian Institute of Science *Bangalore, India*
Advised by Prof. Aditya Gopalan on machine learning and optimization for Large Language Model based problems as part of my Bachelor's Thesis. Worked on efficient fine tuning of language models. Explored active learning strategies for efficient sample selection – showed 1.5x faster convergence on goal-oriented conversation tasks.

Research Intern Dec 2022 - Jul 2023
Language, Reasoning and Education Lab, ETH Zurich *Switzerland (Remote)*
advised by Prof. Mrinmaya Sachan on neuro-symbolic methods for Natural Language Processing. Worked on mathematical reasoning problems in Large Language Models. Implemented an In-Context Prompting pipeline inspired from case-based reasoning concepts.

Research Intern May 2022 - Aug 2022
Université du Québec à Montréal *Montréal, Canada*
advised by Prof. Marie-Jean Meurs on an AI-based system for anonymization in corpora of personal data, such as in the legal domain and in the mental health domain. Explored adversarial training and differential privacy for obfuscation of implicit indicators of private information and authorship attributes, in order to release readable, anonymized versions of text corpora for downstream tasks. Also explored Named Entity Recognition and other pseudo-anonymization strategies as part of the pipeline.

External Collaborator Jan 2021 - Jul 2022
Conversational AI and Social Analytics (CAISA) Lab, University of Marburg *Germany (Remote)*
Working with Prof. Lucie Flek and Ramit Sawhney on user-contextual modeling and privacy preservation, mainly for NLP and Computational Social Science problems. Implemented neural network architectures which included Transformers, Graph Neural Networks, and Hyperbolic Neural Networks for these tasks. Studied the impact of differential privacy (DP-SGD) on model fairness, robustness to distribution shifts, and on user-contextual modeling.

AI Division Member Feb 2020 - Aug 2022
Project MANAS *Manipal, India*
The official AI and Robotics team of Manipal, with a team primarily dedicated to building an autonomous car for Indian roads. Worked on Deep Learning and Computer Vision pipelines such as lane detection.

AWARDS

Google Research Week 2023
Selected to be a part of the ML Foundations track in a three day research week comprising of lectures and discussions with faculty and researchers from Google, DeepMind, ETH Zurich, etc.

Mitacs GRI 2022
Awarded a fully-funded scholarship by Mitacs Inc., Canada to pursue a summer research project at the Université du Québec à Montréal on anonymization and bias reduction in AI & Natural Language systems.

DAAD WISE 2022
Selected for the DAAD WISE research scholarship award for Summer 2022.

Mahindra Rise Prize Challenge

Project MANAS won the Million Dollar Mahindra Rise Prize Challenge, placed top 13 out of 153 teams in India.

COURSEWORK

Advances in Deep Generative Models (CS395T), Reinforcement Learning - Theory and Practice (CS394R), Generative Models in Machine Learning (ECE381V), Topics in Natural Language Processing (CS395T).