ADITYA SRIVASTAVA

Boulder, CO • 718-200-1908 • aditya.srivastava@colorado.edu
linkedin.com/in/IamAdiSri • github.com/IamAdiSri

EDUCATION

MS in Computer Science [GPA 4/4] *Expected 2024*
University of Colorado, Boulder, United States

MS (Research) in Computational Linguistics [GPA 8.25/10] *2022*
IIIT Hyderabad, India

BTech (Honors) in Computer Science *2019*
IIIT Hyderabad, India

- Recipient of the **Dean's List Scholarship**.

TECHNICAL SKILLS

Programming Languages: Python, C, C++, Javascript
Web Tech: HTML, CSS, FastAPI, Flask
Libraries and Packages: PyTorch, NumPy, Sklearn, spaCy, Keras, Tensorflow
Data Warehousing: SQL, ElasticSearch
Cloud Platforms: Amazon Web Services, Google Cloud Platform
Miscellaneous: GNU-Linux, Windows, Git, LaTeX, Arduino

EXPERIENCE

Student Assistant, Science of Science & Computational Discovery Lab (University of Colorado, Boulder, United States) *2022 - Present*

- Currently exploring applications of **recommendation systems** for assisting scientific research.

Research Engineer - ML and NLP, SentiSum (London, United Kingdom) *2021 - 2022*

- Developed systems for **text classification**, **textual anomaly detection** and **unsupervised information extraction**.
- Made a **3x improvement** to **translation** throughput and improved translation performance by shifting away from online translation services to bespoke, in-house systems.
- **Scaled** and **parallelized** deep learning based natural language processing systems for efficient inference on production loads.
- Employed cloud platforms such as **AWS** and **GCP** to serve live machine learning models to clients for inference and for use in downstream tasks.

Research Assistant, Language Technologies Research Center (IIIT Hyderabad, India) *2017 - 2022*

- Researched automated **identification of political bias** in news, using a mix of hand crafted linguistic features and deep neural networks.
- Researched low-resource NLP methods for **sentiment analysis** and **sequence generation** in codemixed languages.
- **Optimized large language models** to be efficient in terms of both data and compute, and trained them in a multilingual setting.

Research Assistant, Rakshak Project - AI for Medicine (IIIT Hyderabad, India) *2020 - 2021*

- Built a data pipeline in collaboration with Intel Labs and the Government of India, spanning multispecialty hospitals nationwide with the intent to democratize medical data for AI and medical research.

Research Intern, ICAR CNR (University of Calabria, Italy) *2019 - 2020*

- Researched deep learning for recommendation systems through **memory**, **capsule** and **graph neural networks**.

Teaching Assistant, CL1.101 Introduction to Linguistics (IIIT Hyderabad, India) *2019 - 2019*

- Conducted tutorials, and set/graded assignments and test papers for the undergrad STEM course.

PROJECTS

Paper: TLDR for CODWOE, SemEval Workshop 2022 (aclanthology.org/2022.semeval-1.6) *July 2022*

- Achieved **first place** on the definition modeling subtask and attained competitive scores on the embedding generation subtask.
- Augmented the transformer architecture and explored techniques such as **unsupervised pretraining**, **multitask learning** and **contrastive learning**.
- Published "**TLDR: Transformers for Learning Dictionaries and their Representations**" at the CODWOE shared task in the SemEval Workshop 2022, NAACL.

Personal Project: HF-Trim (github.com/IamAdiSri/hf-trim) *July 2022*

- Created a python package for trimming the vocabulary on pretrained HuggingFace models, **lowering memory requirements** of models at **minimal cost to performance**.
- Employed in both research and production environments.
- **Actively maintained** on GitHub and hosted on the Python Packaging Index.

Paper: HCMS for SentiMix, SemEval Workshop 2020 (aclanthology.org/2020.semeval-1.167) *December 2020*

- Designed a multilevel neural architecture, employing **CNNs** and **self-attention** to perform sentiment analysis in a low-resource, codemixed language setting.
- Published "**HCMS: A Neural Approach to Sentiment Analysis for CodeMixed Texts**" at the SemEval Workshop 2020, ACL.

Research Project: Collaborative Memory Networks for Recommendation Systems (github.com/IamAdiSri/cmn4recosys) *June 2019*

- Ported the architecture detailed in the "Collaborative Memory Networks for Recommendation Systems" paper by Ebesu et al. from **Tensorflow** to **PyTorch**.

ACHIEVEMENTS

- Ranked **8th globally** in the Labor challenge at AIcrowd, a Kaggle-like competitive ML platform. (January 2021)
- Ranked **11th globally** in the SCRBL challenge at AICrowd. (January 2021)
- **Winner** of the Howzhack 2019, India's biggest online hackathon.
- **Winner** of the Megathon 2018, a national university-level hackathon.