Laiba Mehnaz

+1 929 584 4743| lm4428@nyu.edu | Website | linkedin | github

EDUCATION

New York University, Tandon School of Engineering   May 2023
Master of Science in Computer Science
Relevant coursework: Design and Analysis of Algorithms, Machine Learning, Deep Learning

Delhi Technological University, New Delhi, India   May 2020
Bachelor of Technology in Software Engineering
Relevant coursework: Data Structures in Java, Database Management Systems, Object Oriented Programming

TECHNICAL SKILLS

Languages: Python, Java, C/C++, R, SQL
Technologies: PyTorch, TensorFlow, AWS EC2, Keras, SpaCy, Sci-Kit, NLTK, Gensim, D3.js, Git, Linux, CUDA, Docker, HPC

WORK EXPERIENCE

Applied Scientist Intern   May 2022 – Aug 2022
Amazon   *Seattle, USA*

Multilingual domain adaptation for zero-shot cross-lingual transfer
- Developed and trained deep learning models using PyTorch on AWS EC2 machines, that can adapt multilingual language models to specific domains/datasets/tasks, and show high performance on languages that are not seen during training.

Research Assistant   June 2020 – June 2021
MIDAS lab, IIIT-Delhi   *New Delhi, India*

Conversation summarization and translation
- Led a team to curate and release a large scale conversation summarization dataset for conversational AI systems.
- Built and implemented several state-of-the-art large language models to summarize as well as translate conversations written in code-mixed Hindi-English to English.
- Conducted an exhaustive analysis to show why large language models do not generalize to different languages and fail in a similar manner.
- Built a Python framework to compute automated code-mixed metrics for Hindi-English code-mixed data.

Domain Robustness of pretrained language models
- Conducted a thorough study to show how BERT and RoBERTa generalize to new unseen data using probing and domain divergence.
- Introduced zero-shot probing on tasks like NER, POS tagging, and coreference resolution to test robustness of BERT and RoBERTa to unseen domain of data.

PROJECTS

Benchmarking Cloud-masking on NYU HPC
- Developing the code to benchmark NYU HPC on the task of identifying clouds from satellite images on MLCommons Science benchmark.

Unsupervised Domain Adaptation for Sentiment Analysis using BERT   [**poster**] [**code**]
- Built a system using adversarial neural networks(DANs) and increased the accuracy of large-scale language models on new data by 12.5% without using the new data(unsupervised), for the task of sentiment analysis.
- Awarded the first place for this project in the The 17th Term Project Showcase, at National University of Singapore.   [**certificate**]

"GupShup: An Annotated Corpus for Abstractive Summarization of Open-Domain Code-Switched Conversations."
EMNLP-2021, Dominican Republic.
Laiba Mehnaz, Debanjan Mahata, Rakesh Gosangi, Uma Sushmitha Gunturi, Riya Jain, Gauri Gupta, Amardeep Kumar, Isabelle Lee, Anish Acharya, Rajiv Ratn Shah. [**paper**] [**code**]

"Analyzing the Domain Robustness of Pretrained Language Models, Layer by Layer."
AdaptNLP at EACL-2021.
Abhinav Ramesh Kashyap, Laiba Mehnaz, Bhavitvya Malik, Abdul Waheed, Devamanyu Hazarika, Min-Yen Kan, Rajiv Ratn Shah. [**paper**]

"Automatic classification of tweets mentioning a medication using pre-trained sentence encoders."
SMM4H at COLING-2020, Italy, Spain.
Laiba Mehnaz. [**paper**] [**poster**]

"Using Transfer Learning for detecting drug mentions in tweets."
ICT4SD-2020, Goa, India.
Laiba Mehnaz and Rajni Jindal. [**paper**]

"MIDAS@SMM4H-2019: Identifying Adverse Drug Reactions and Personal Health Experience Mentions from Twitter."
SMM4H at ACL-2019, Italy.
Sarthak Anand, Debanjan Mahata, Haimin Zhang, Simra Shahid, Laiba Mehnaz, Yaman Kumar, Rajiv Ratn Shah. [**paper**] [**poster**] [**code**]

"MIDAS at SemEval-2019 Task 6: Identifying Offensive Posts and Targeted Offense from Twitter."
SemEval at NAACL-HLT-2019, Minneapolis, USA.
Haimin Zhang, Debanjan Mahata, Simra Shahid, Laiba Mehnaz, Sarthak Anand, Yaman Kumar, Rajiv Ratn Shah, Karan Uppal. [**paper**]

"MIDAS at SemEval-2019 Task 9: Suggestion Mining from Online Reviews using ULMFiT."
SemEval at NAACL-HLT-2019, Minneapolis, USA.
Sarthak Anand, Debanjan Mahata, Kartik Aggarwal, Laiba Mehnaz, Simra Shahid, Haimin Zhang, Yaman Kumar, Rajiv Ratn Shah, Karan Uppal. [**paper**]

"Identification of Emergency Blood Donation Request on Twitter."
SMM4H at EMNLP-2018, Brussels, Belgium.
Puneet Mathur, Meghna Ayyar, Sahil Chopra, Simra Shahid, Laiba Mehnaz, Rajiv Ratn Shah.[**paper**]