Aseem Srivastava
PhD Scholar at LCS2 Lab, IIIT Delhi, India

as3eem.github.io   @ aseems@iiitd.ac.in
linkedin.com/in/as3eem   github.com/as3eem
Research Block, IIIT Delhi, India   +91 8736977760

A fifth-year PhD student at IIIT Delhi, currently under the guidance of Dr. Md. Shad Akhtar and Dr. Tanmoy Chakraborty at LCS2 Lab, India. My research interest is in NLP/Deep Learning for Dialogue Systems, with a specialized focus on improvising conversational mental health assistants. I specialize in applying large language models (LLMs) and LLMOps for dialogue and behavioral understanding and encourage open sourcing with production-ready research.

Education

INDRAPRASTHA INSTITUTE OF INFORMATION TECHNOLOGY (IIIT DELHI), DELHI 2020 - PRESENT
PhD in Computer Science and Engineering (CSE) | CGPA : 8.53
Thesis : Building Blocks of Dialogue System for Effective Virtual Mental Health Assistants
Supervisor : Dr. Md. Shad Akhtar & Dr. Tanmoy Chakraborty

KAMLA NEHRU INSTITUTE OF TECHNOLOGY (KNIT), SULTANPUR 2016 - 2020
B.Tech in Computer Science and Engineering (CSE) | Agg : 68.3%
Thesis : Amazon Review Analysis to Guage User Sentiments

Publications

EMNLP (Main) 2024 | **Knowledge Planning in Large Language Models for Domain-Aligned Counseling Summarization**
Aseem Srivastava, Smriti Joshi, Tanmoy Chakraborty, Md Shad Akhtar
`LLM` `Controlled Generation` `Knowledge Infusion`

JMIR MH 2024 | **Exploring the Efficacy of LLMs in Summarizing Counseling Sessions : A Benchmark Study**
Prottay Kumar Adhikary, Aseem Srivastava, Shivani Kumar, Salam Michael Singh, Puneet Manuja, Jini K Gopinath, Vijay Krishnan, Swati Kedia, Koushik Sinha Deb, Tanmoy Chakraborty
`LLM` `GenerativeAI`

The Web Conf 2023 | **Response-act Guided Reinforced Dialogue Generation for Mental Health Counseling**
Aseem Srivastava, Ishan Pandey, Md. Shad Akhtar, Tanmoy Chakraborty
`Transformer Reinforcement Learning` `GenerativeAI` `Controlled Generation`

KDD 2022 | **Counseling Summarization using Mental Health Knowledge Guided Utterance Filtering**
Aseem Srivastava, Tharun Suresh, Grin Lord, Md. Shad Akhtar, Tanmoy Chakraborty
`LLM` `Knowledge Infusion` `Controlled Generation`

ICWSM 2022 | **A Computational Approach to Understand Mental Health from Reddit : Knowledge-aware Multitask Learning Framework**
Usha Lokala, Aseem Srivastava, Triyasha Ghosh Dastidar, Tanmoy Chakraborty, Md Shad Akthar, Maryam Panahiazar, Amit Sheth
`Transformers` `Reddit Mental Health` `Knowledge Infusion`

WSDM 2022 | **Speaker and Time-aware Joint Contextual Learning for Dialogue-act Classification in Counselling Conversations**
Ganeshan Malhotra, Abdul Waheed, Aseem Srivastava, Md. Shad Akhtar, Tanmoy Chakraborty
`Transformers` `Joint Learning`

Under Review | › Knowledge-infused Hierarchy-aware Emotion Recognition in Code-mixed Conversations
› Sentiment-guided Commonsense-aware Response Generation for Counseling
› Critical Behavioral Traits Foster Peer Engagement in Online Reddit Communities

Skills

Interests   NLP - Dialogue Systems, Deep Learning, Machine Learning, Human Behavior, GenAI, LLMs
Technical   Data Structures and Algorithms, Python, PyTorch, LLMOps, Tensorflow, Git, Cloud Services
Web & Android   NodeJS, Flutter, MySQL, NoSQL

Experience

RESEARCH INTERN   AUGUST 2022 - JANUARY 2023
Mpathic | USA (Remote)
Undertook research statement around NLP and dialogue summarization tailored for counseling. I led the development of an end-to-end pipeline, crafting a novel methodology from scratch and overseeing its implementation for in-house deployment, including optimizing team workflows. Our research findings were published at KDD 2022 (A* conference).

LLMs AWS

DATA SCIENCE INTERN   JULY 2019 - AUGUST 2019
Analytics Vidhya | Gurgaon, India
Spearheaded the development of machine learning and deep learning models for an in-house portal. In addition, we worked with a team to enhance our understanding of deep neural networks to facilitate better recommendation frameworks.

Machine Learning Deep Learning Text Analytics

Organized Tutorials & Workshops

ICON 2023 (Tutorial)	Building Blocks of AI-Driven Mental Health Counseling
	Organizers : *Aseem Srivastava, Neeraj, Yash Kumar Atri, Shivani Kumar, Shad Akhtar, Tanmoy Chakraborty*

Invited Talks & Symposiums

[Symposiums]

> **Google Research Week 2023 & 2024** – Got two back to back invitations to attend and present our work at Research Week with Google, India.

[Talks]

> **ACM ARCS 2024** – Got invited by ACM India to present a lightning talk and our work on dialogue response generation in NISER Bhubhneshwar.
> **Cord.AI 2023** – Got invited to present a talk on Role of Conversational Agent's Component in Digital Counseling.

Position of Responsibility

2024	Serving as Program Committee member at ASONAM 2024, Italy.
2023	Leading an open-source community of 500+ like-minded enthusiasts to encourage awareness and knowledge of Deep Learning for NLP.
2022	Served as Web Chair at International Conference on Natural Language Processing (ICON) 2022, India.
2022	Served as Web Chair at CONSTRAINT Workshop (co-located w/ ACL 2022).
2021	Served as a volunteer at notable conferences, including KDD, ACL, AAAI, COLING, and WSDM.

Achievements

2023	Received Google Research Grant to present our WWW '23 paper in Austin, USA.
2022	Received ACM India Grant to present our KDD '22 paper in Washington DC, USA.
2019	Placed in the top 9% (N=8000) of the leaderboard in IIT-M Alumni Association Hackearth's machine learning challenge with an accuracy of 99.63%.
2018	Runners up in Facebook's Digital Hackathon for creating an social web platform and won INR 40,000.

References

Dr. Md. Shad Akhtar
Assistant Professor, IIIT DELHI
(shad.akhtar@iiitd.ac.in)

Dr. Tanmoy Chakraborty
Associate Professor, IIT DELHI
(chak.tanmoy.iit@gmail.com)