IJCNLP-AACL 2025

NLP-AI4Health- Second Workshop on Integrating NLP and AI for Multilingual and Patient-Centric Healthcare Communication

Proceedings of the Workshop

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Preface

We welcome you to the Second Workshop on Integrating NLP and AI for Multilingual and Patient-Centric Healthcare Communication (NLP-AI4Health 2025), held on December 23, 2025, in Mumbai, India, in conjunction with IJCNLP-AACL 2025.

Healthcare communication is a complex domain where language barriers, cultural nuances, and technical literacy often hinder effective patient care. The primary objective of NLP-AI4Health is to explore how Natural Language Processing (NLP) and Artificial Intelligence (AI) can bridge these gaps, particularly in multilingual and resource-constrained environments. This year, we continue our mission to build a community of interdisciplinary experts including clinicians, developers, and researchers dedicated to co-creating inclusive and ethically aligned language technologies.

For this second edition, we received 11 submissions from researchers around the globe. The review process was rigorous, focusing on technical novelty, clinical relevance, and adherence to ethical standards. Ultimately, 4 papers were accepted for presentation, resulting in an acceptance rate of approximately 36%.

The accepted papers cover a focused yet diverse spectrum of healthcare applications, bridging the gap between clinical rigor and linguistic reality. The research explores key tasks such as multimodal emotion recognition, automated behavioral coding, and the construction of large-scale medical knowledge graphs. Notably, the proceedings highlight significant advancements in mental health, with studies proposing novel frameworks for cross-lingual distress ontologies and systems for evaluating counselor-client interactions.

Shared Task and Keynotes
A highlight of this year's workshop is the Shared Task on Multilingual Health Question Answering, focusing on Head and Neck Cancer (HNC) and Cystic Fibrosis (CF). This task challenges participants to build models capable of summarizing and answering patient questions across 8 languages, including Hindi, Telugu, Tamil, and Bengali, fostering robust QA systems for the Indian context.

We are also honored to host two distinguished keynote speakers: Prof. Tanmoy Chakraborty (IIT Delhi) and Dr. Parag R. Rindani (Wockhardt Hospitals). Their combined expertise spanning state-of-the-art AI research and hospital administration perfectly encapsulates the workshop's goal of uniting technical innovation with clinical reality.

Acknowledgements
We express our deepest gratitude to the Program Committee members for their timely and insightful reviews. We also thank the organizers of IJCNLP-AACL 2025 for their support in hosting this event. Finally, we thank the authors for their contributions and the participants for engaging in this vital dialogue on the future of healthcare communication.

We hope these proceedings inspire new collaborations and innovations that make healthcare more accessible, understandable, and equitable for all.

The NLP-AI4Health 2025 Organizing Committee:
Arun Zechariah, Balu Krishna S, Dipti Misra Sharma, Hannah Mary Thomas, Joy Mammen , Parameswari Krishnamurthy, Vandan Mujadia (Alphabetically ordered)

Organizing Committee

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Keynote Talk

Towards Enhanced Conversational Dynamics for Effective Virtual Therapist-Assistive Counseling

Tanmoy Chakraborty
IIT Delhi

Abstract: The increasing demand for digital healthcare, coupled with current infrastructure limitations, requires digital therapeutic interventions. My talk will focus on the design and implementation of Virtual Mental Health Assistants modules that serve as therapist-assistive mechanisms to automate their complex work cycle. We work on building novel LLM-based methods for dialogue understanding, summarization, causation and generation, and our research captures the intricacies of therapeutic communication while incorporating signs into human behavior analysis. In support of this, we also develop novel datasets, tools and techniques (some of which have gone through rigorous POC) in collaboration with professional therapists and counselors.

Bio: Tanmoy Chakraborty is a Rajiv Khemani Young Faculty Chair Professor in AI and an Associate Professor in the Dept. of Electrical Engineering and the School of AI at IIT Delhi. He leads the Laboratory for Computational Social Systems (LCS2), a research group that primarily focuses on building economical, adaptable and interpretable language models. He served as the DAAD visiting professor at MPI Saarbrucken, PECFAR visiting professor at TU Munich and Humboldt visiting professor at TU Darmstadt. Tanmoy has received numerous recognitions, including the ACM India Outstanding Contribution to Computing Education Award, INSA Young Associate, Ramanujan Fellowship, ACL '23 Outstanding Paper Award, IJCAI'23 AI for Social Good Award, and several faculty awards from industries like Microsoft, IBM, Google, LinkedIn, JP Morgan, and Adobe. He has authored two textbooks – Social Network Analysisand Introduction to Large Language Models". Tanmoy earned his PhD from IIT Kharagpur in 2015 as a Google PhD Scholar. More details may be found at tanmoychak.com.

Keynote Talk

Language Technology Adoption in Health - What Should We Know from Safety Standards?

Parag R Rindani
Wockhardt Hospitals

Abstract: As Natural Language Processing and AI systems enter clinical workflows — from automated transcription to patient-facing chatbots — the stakes for safety, reliability, and accountability are higher than ever. These technologies promise greater efficiency, improved documentation, and enhanced patient access, but they also introduce new vulnerabilities around accuracy, bias, data privacy, and inappropriate clinical decision influence. This talk examines how healthcare can embrace language technologies without compromising patient safety. It connects technological innovation with established medical safety standards, highlighting the regulatory frameworks, risk-mitigation protocols, and clinical governance mechanisms that should shape the development and deployment of NLP-driven tools. The session will outline practical safeguards for developers, hospital leaders, and clinicians to ensure that language technology enhances patient outcomes — not endangers them.

Bio: Dr. Parag R Rindani is working as Group Chief Executive Officer - Wockhardt Hospitals Ltd. He is a post-graduate in Microbiology, Hospital Administration and Management with specialization in Finance. He is a Principal Assessor for the NABH and is part of the Programme on Implementation training, accreditation and assessor training team at NABH. He has over multiple NABH assessments done and has participated in many programmes on Implementation as also Assessor Refresher Courses and Conclaves. He has also been awarded the "Wockhardt Quality Team Leadership Award" in 2007. He has worked extensively on setting up quality management systems in Indian hospitals. He has been an integral part of NABH and JCI accreditation and re-accreditation process. He has also successfully conducted programmes on setting up infection control programmes in hospitals using PDCA cycle in the Maldives, India and Bahrain. He has also contributed and various articles on lab management and clinical governance.

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