



Priyanshu Priya

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About me

I am a Ph.D. student at the Indian Institute of Technology Patna, Bihar, India, under the guidance of Prof. Asif Ekbal. I am honored to be a recipient of the prestigious Innovation in Science Pursuit for Inspired Research (INSPIRE) Fellowship, awarded by the Department of Science and Technology, Ministry of Science and Technology, Government of India for pursuing my Ph.D.

Research Focus

My research lies in the domain of Natural Language Processing (NLP), with a current focus on incorporating socio-linguistic cues such as politeness, empathy, persuasiveness, and personalization into conversational AI systems. This work is applied across various critical tasks, including mental health counseling, legal aid, customer support, and negotiation, to improve human-computer interactions in socially sensitive contexts.

Skills

Programming Languages: Python, PyTorch, C, C++, JAVA

Web Technologies: HTML, PHP, JSP, Javascript

Database: SQL, MySQL

Education

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| 2020-2025 | Ph.D. Computer Science & Engineering (Pursuing) <i>Indian Institute of Technology Patna, Bihar, India</i> | CGPA: 9.36/10 |
| 2016-2018 | M.Sc. Computer Science <i>Central University of South Bihar, Bihar, India</i> | CGPA: 9.26/10 |
| 2013-2016 | B.Sc. Computer Application (Honours) <i>Patna Women's College, Bihar, India</i> | 88% |
| 2011-2013 | Intermediate Examination <i>St. Joseph's Convent High School, Patna, Bihar, India</i> | 79.4% |
| 2010-2011 | Secondary School Examination <i>D.A.V Public School, Walmi Complex, Patna, Bihar, India</i> | CGPA: 10/10 |

Publications

Conference Proceedings

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|------|---|
| 2025 | <i>Priyanshu Priya</i> , Rishikant Chigrupaatii, Mauajama Firdaus, Asif Ekbal. GENTEEL-NEGOTIATOR: LLM-Enhanced Mixture-of-Expert-based Reinforcement Learning Approach for Polite Negotiation Dialogue. In Proceedings of the The 39th Annual AAAI Conference on Artificial Intelligence (AAAI) 2025. [Accepted] |
| 2024 | <i>Priyanshu Priya</i> , Desai Vishesh Yasheshbhai, Ratnesh Kumar Joshi, Roshni Ramnani, Anutosh Maitra, Shubhashis Sengupta, Asif Ekbal. TRIP NEGOTIATOR: A Travel Persona-aware Reinforced Dialogue Generation Model for Personalized Integrative Negotiation in Tourism. In Findings of the Association for Computational Linguistics: EMNLP 2024. [pdf] |
| 2024 | <i>Priyanshu Priya</i> *, Gopendra Vikram Singh*, Mauajama Firdaus, Jyotsna Agarwal, Asif Ekbal. On the Way to Gentle AI Counselor: Politeness Cause Elicitation and Intensity Tagging in Code-mixed Hinglish Conversations for Social Good. In Findings of the Association for Computational Linguistics: NAACL 2024 (pp. 4678-4696). [*Jointly First authors] [pdf] |
| 2023 | Kshitij Mishra*, <i>Priyanshu Priya</i> *, Manisha Burja, Asif Ekbal. e-THERAPIST: I suggest you to cultivate a mindset of positivity and nurture uplifting thoughts. In Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing (pp. 13952-13967). [*Jointly First authors] [pdf] |
| 2023 | Mauajama Firdaus*, <i>Priyanshu Priya</i> *, Asif Ekbal. Mixing it up: Inducing empathy and politeness using multiple behaviour-aware generators for conversational systems. In Findings of the Association for Computational Linguistics: IJCNLP-AAACL 2023 (Findings) (pp. 336-347). [*Jointly First authors] [pdf] |
| 2023 | <i>Priyanshu Priya</i> *, Kshitij Mishra*, Palak Totala, Asif Ekbal. PARTNER: A Persuasive Mental Health and Legal Counselling Dialogue System for Women and Children Crime Victims. In IJCAI (pp. 6183-6191). [*Jointly First authors] [pdf] |
| 2023 | Kshitij Mishra*, <i>Priyanshu Priya</i> *, Asif Ekbal. PAL to lend a helping hand: Towards building an emotion adaptive polite and empathetic counseling conversational agent. In Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers) (pp. 12254-12271). [*Jointly First authors] [pdf] |
| 2023 | Kshitij Mishra*, <i>Priyanshu Priya</i> *, Asif Ekbal. Help me heal: A reinforced polite and empathetic mental health and legal counseling dialogue system for crime victims. In Proceedings of the AAAI Conference on Artificial Intelligence (Vol. 37, No. 12, pp. 14408-14416). [*Jointly First authors] [pdf] |
| 2022 | Gopendra Vikram Singh*, <i>Priyanshu Priya</i> *, Mauajama Firdaus*, Asif Ekbal, Pushpak Bhattacharya. EmoInHindi: A Multi-label Emotion and Intensity Annotated Dataset in Hindi for Emotion Recognition in Dialogues. In Proceedings of the Thirteenth Language Resources and Evaluation Conference (pp. 5829-5837). [*Jointly First authors] [pdf] |

Journal Articles

- 2025 *Priyanshu Priya**, Armita Mani Tripathi*, Deeksha Varshney, Mauajama Firdaus, Asif Ekbal. EMPOWER-KARE: Deep Prompt Learning for Knowledge-aware Response Generation in Clinical Counseling and Legal Support Conversations. In IEEE Transactions on Artificial Intelligence. [*Jointly first authors] [[pdf](#)]
- 2024 *Priyanshu Priya*, Mauajama Firdaus, Asif Ekbal. XeroPol: Emotion-Aware Contrastive Learning for Zero-Shot Cross-Lingual Politeness Identification in Dialogues. IEEE Transactions on Computational Social Systems. [[pdf](#)]
- 2024 *Priyanshu Priya*, Mauajama Firdaus, Asif Ekbal. Two in One: A multi-task framework for politeness turn identification and phrase extraction in goal-oriented conversations. Computer Speech & Language, 88, 101661. [[pdf](#)]
- 2024 *Priyanshu Priya*, Mauajama Firdaus, Asif Ekbal. Computational politeness in natural language processing: A survey. ACM Computing Surveys, 56(9), 1-42. [[pdf](#)]
- 2023 *Priyanshu Priya*, Mauajama Firdaus, Asif Ekbal. A multi-task learning framework for politeness and emotion detection in dialogues for mental health counselling and legal aid. Expert Systems with Applications, 224, 120025. [[pdf](#)]

Tutorials

- 2024 *Priyanshu Priya*, Mauajama Firdaus, Asif Ekbal. From Theory to Practice: Recent Advances and Future Prospects in Computational Politeness in Natural Language Processing. In International Conference on Data Science and Management of Data (CODS-COMAD) 2024, IIT Jodhpur, India. [[pdf](#)][[Website](#)]
- 2024 *Priyanshu Priya*, Mauajama Firdaus, Deeksha Varshney, Asif Ekbal. Knowledge-enhanced Response Generation in Dialogue Systems: Current Advancements and Emerging Horizons. In Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024): Tutorial Summaries (pp. 80-87). [[pdf](#)][[Website](#)]
- 2024 *Priyanshu Priya*, Gopendra Vikram Singh, Mauajama Firdaus, Asif Ekbal. Affective Computing for Social Good Applications: Current Advances, Gaps and Opportunities in Conversational Setting. In European Conference on Information Retrieval (pp. 375-380). Cham: Springer Nature Switzerland. [[pdf](#)]
- 2023 *Priyanshu Priya*, Kshitij Mishra, Mauajama Firdaus, Asif Ekbal. Empathetic Conversational Artificial Intelligence Systems: Recent Advances and New Frontiers. In IJCAI 2023. [[pdf](#)][[Website](#)]
- 2023 *Priyanshu Priya*, Kshitij Mishra, Mauajama Firdaus, Asif Ekbal. Navigating the Landscape of Empathetic Dialogue Systems: Current Innovations and Future Developments. In International Conference on Natural Language Processing 2023. [[Website](#)]

Under Review

- 2024 *Priyanshu Priya*, Saurav Dudhate, Desai Vishesh Yasheshbhai, Asif Ekbal. We Argue to Agree: Towards Personality-Driven Argumentation-Based Negotiation Dialogue Systems for Tourism. [Under Review at ACL 2025]
- 2024 *Priyanshu Priya**, Hardik Goyal*, Asif Ekbal. On the Way to Faithful AI Doctor: Mitigating Hallucinations in LLMs with Knowledge and In-context Learning for Faithful Medical Dialogue Generation. In ACM Transactions on Computing for Healthcare. [*Jointly first authors]
- 2024 *Priyanshu Priya**, Khanjan Yagneshbhai Pathak*, Mauajama Firdaus, Sudhir Kumar, Asif Ekbal. PROMOTE: Three-stage Prompting of Large Language Models for Polite and Empathetic Response Generation in Dialogues. In IEEE Transactions on Affective Computing. [*Jointly first authors]
- 2024 Gopendra Vikram Singh*, *Priyanshu Priya**, Mauajama Firdaus, Asif Ekbal. A Computational Approach to Understanding Politeness and Intent in Mental Health Support Conversations. In ACL Rolling Review. [*Jointly first authors]

Projects

R&D Projects

1. IITP Centre of Excellence in Cyber Crime Prevention against Women and Children- AI based Tools for Women and Children Safety, Sponsored by Ministry of Home Affairs, Government of India.

Objective: To develop an empathetic conversational AI agent for mental health counseling and legal assistance of

crime victims.

2. An Empathetic Knowledge Grounded Conversational System for Mental Health Counseling and Legal Assistance, Sponsored by IHUB Anubhuti, TIH, IIIT Delhi.

Objective: *To develop an empathetic knowledge-grounded conversational AI agent for mental health counseling and legal assistance of crime victims.*

3. A Negotiation Dialogue Agent, Sponsored by Accenture Pvt. Ltd.

Objective: *To develop a sophisticated conversational AI system to facilitate intelligent and context-aware negotiations on multiple facets within the tourism industry.*

M.Sc. Thesis Project

Jan-Apr 2018 Development of a Dust Detection Algorithm and Interactive Web-Based Near Real-Time Visualization of INSAT-3D Satellite Products
Objective: To develop a machine learning algorithm using INSAT-3D satellite data to detect dust storms, improving real-time monitoring and forecasting accuracy. An interactive web-based tool was also created for near real-time visualization of dust index and satellite products, supporting environmental and meteorological applications.
Advisor: *Dr. Vikas Singh, Scientist (SE), National Atmospheric Research Laboratory (NARL), Department of Space, Govt. of India*

Honors and Awards

Oct 2023 Gold Medalist (M.Sc.) - Best Graduate of School, Central University of South Bihar.
Oct 2023 Gold Medalist (M.Sc.) - Best Graduate of Department, Central University of South Bihar.
Apr 2023 Our research paper, titled "A multi-task learning framework for politeness and emotion detection in dialogues for mental health counselling and legal aid" was featured in Deccan Herald, highlighting its potential to revolutionize AI-powered therapy in India (<https://www.deccanherald.com/amp/story/technology/soon-a-polite-empathetic-bot-for-therapy-1209842.html>).
Jun 2019 Recipient of the UGC-NET Lectureship, awarded by the University Grants Commission, Government of India.
Dec 2018 Recipient of the UGC-NET Lectureship, awarded by the University Grants Commission, Government of India.
Jul 2018 Recipient of the UGC-NET Lectureship, awarded by the University Grants Commission, Government of India.
Oct 2017 Gold Medalist (B.Sc.) - First Rank Holder at the University Examination, Patna University

Scholarships and Grants

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| Jan 2025 | Received travel grant from the ACM-W Scholarship Award and AAAI-25 Student Scholar, Diversity and Inclusion Scholar, & Volunteer Travel Support to attend 39th Annual AAAI Conference on Artificial Intelligence (AAAI 25), Philadelphia, Pennsylvania, USA. |
| May 2024 | Received travel grant from the International Travel Support (ITS) Scheme of the Science and Engineering Research Board (Statutory Body Established Through an Act of Parliament: SERB Act 2008) Department of Science and Technology, Government of India to attend the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation, Torino, Lingotto, Italia. |
| Dec 2023 | Received travel grants from the Student Travel Grant Program of Microsoft Research India and the ACM India-IARCS scheme to attend The 2023 Conference on Empirical Methods in Natural Language Processing, Singapore. |
| Aug 2023 | Received travel grant under the Student Travel Grant Program of Microsoft Research India to attend the 32nd International Joint Conference on Artificial Intelligence, Macao, SAR, China. |
| Oct 2021 | Recipient of the prestigious Innovation in Science Pursuit for Inspired Research (INSPIRE) Fellowship, awarded by the Department of Science and Technology, Ministry of Science and Technology, Government of India. |
| May 2020 | Recipient of the National Fellowship for Other Backward Classes, awarded by the University Grants Commission, Government of India. |
| Dec 2019 | Recipient of the UGC-NET Junior Research Fellowship, awarded by the University Grants Commission, Government of India. |
| Oct 2017 | Gold Medalist (B.Sc.) - First Rank Holder at the University Examination, Patna University, India. |
| Nov 2016 | Merit Scholarship First Rank Holder at University Examination, Patna Women's College, Patna University, Patna, India. |
| Aug 2016 | Merit Scholarship CUSB Entrance Test, Central University of South Bihar, India. |

Research Interests

Natural Language Processing

Conversational AI

NLP for Mental Health

Large Language Model

Generative AI

Deep Learning

Additional Information

Participated in prominent research events like Amazon Research Days 2023, Google Graduate Symposium 2021, Google Research Week 2022, and Google DeepMind Research Symposium 2025, fostering interdisciplinary knowledge sharing.

Served as a member of the organizing team and anchored for the inaugural workshop on COIL-D (Centre of Indian Language Data), sponsored by Bhashini, MeitY, Government of India, contributing to the planning, coordination, and successful execution of the event.

Delivered a lecture on Empathetic Response Generation at a Webinar hosted by Tata Consultancy Services, India.

Served as a reviewer for esteemed journals, including IEEE Transactions on Computational Social Systems, Information Processing and Management - Elsevier, and Computer Speech and Language - Elsevier. Also, reviewed for top-tier conferences such as ACL Rolling Review, AAAI, and EMNLP.

Served on the Program Committee for AAAI 2025 and the EMNLP 2023 Industry Track.

Student volunteer at the 32nd International Joint Conference on Artificial Intelligence (IJCAI 20203), Macao, SAR, China.

Teaching Assistant in several courses for B.Tech and M.Tech at IIT Patna, guiding IIT Patna undergraduate and postgraduate students along with internship candidates from premier Indian institutes on various DL and AI projects.

Teaching Assistantships

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| Spring 2024 | CS546 Big Data Analytics, IIT Patna |
| Spring 2024 | CS516 Big Data Analytics Lab, IIT Patna |
| Fall 2023 | CS349 Artificial Intelligence II, IIT Patna |
| Spring 2023 | CS112 Programming and Data Structures Lab, IIT Patna |
| Spring 2022 | CS102 Programming and Data Structures, IIT Patna |
| Spring 2022 | CS359 Computer Networks Lab, IIT Patna |
| Fall 2022 | CS271 Optimization Techniques, IIT Patna |
| Spring 2021 | CS358 Computer Networks, IIT Patna |

Course Work

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| Fall 2020 | CS561 Artificial Intelligence, IIT Patna |
| Fall 2020 | CS564 Foundations of Machine Learning, IIT Patna |
| Spring 2021 | CS563 Natural Language Processing, IIT Patna |
| Spring 2021 | CS566 Advanced Machine Learning, IIT Patna |
| Spring 2021 | HS514 Technical Communication, IIT Patna |

Referees

Prof. Asif Ekbal (Ph.D Supervisor)
Professor
School of Artificial Intelligence & Data Science
 Indian Institute of Technology Jodhpur, India
 ✉ asif.ekbal@gmail.com

Dr. Mauajama Firdaus
Assistant Professor
Department of Computer Science and Engineering
 Indian Institute of Technology
 (Indian School of Mines), Dhanbad, India
 ✉ mauajama@iitism.ac.in

Dr. Vikas Singh
Scientist (SE)
 Commission for Air Quality Management in National Capital Region and Adjoining Areas, India
 ✉ kuarvikas@gmail.com

Dr. Prabhat Ranjan
Associate Professor
Department of Computer Science
 Central University of South Bihar
 ✉ prabhatranjan@cub.ac.in