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

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

Publications

Conference Proceedings

2025 *Priyanshu Priya*, 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 AAAI Conference on Artificial Intelligence (Vol. 39, No. 23, pp. 25010-25018). [pdf]

2025 Abid Hossain, *Priyanshu Priya*, Armita Mani Tripathi, Pradeepika Verma, Asif Ekbal. MENDER: Multi-hop Commonsense and Domain-specific CoT Reasoning for Knowledge-grounded Empathetic Counseling of Crime Victims. In Proceedings of the 2025 Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics: Human Language Technologies (Volume 4: Student Research Workshop) (pp. 501-516). [pdf]

2024 *Priyanshu Priya*, 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 *Priyanshu Priya**, 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*, *Priyanshu Priya**, 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*, *Priyanshu Priya**, 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-AACL 2023 (Findings) (pp. 336-347). [*Jointly First authors] [pdf]

2023 *Priyanshu Priya**, 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*, *Priyanshu Priya**, 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*, *Priyanshu Priya**, 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*, *Priyanshu Priya**, 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.

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

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 | Multimodality |

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

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

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)
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Indian Institute of Technology Jodhpur, India
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Dr. Mauajama Firdaus
Assistant Professor
Department of Computer Science
and Engineering
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(Indian School of Mines), Dhanbad, India
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Dr. Vikas Singh
Scientist (SE)
Commission for Air Quality Management in National Capital Region and Adjoining Areas, India
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Dr. Prabhat Ranjan
Associate Professor
Department of Computer Science
Central University of South Bihar
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