

# PRASHANT KUMAR NAG

## Curriculum Vitæ

I am an early-career researcher specializing in artificial intelligence, deep learning, and affective computing, with a focus on emotion detection, cognitive appraisal, and explainable AI. My work explores how AI models interpret human emotions in text and how transparent analytical methods can improve understanding, reliability, and human-centered applications. I am committed to developing rigorous, reproducible, and interpretable AI techniques while contributing to research, teaching, and collaborative academic growth.



### RESEARCH INTERESTS

- Core **Affective Computing**  
Computational emotion modeling, appraisal-based emotion reasoning, and human–AI affective interaction
- Core **Text-based Emotion Recognition**  
Sentence-, span-, and context-level models for emotion and emotion-cause detection
- Methods **Explainable AI for NLP**  
Attention-based interpretability, attribution techniques, and rule-based cognitive explanations for deep NLP models

### EDUCATION

Jul. 2019 | Thesis Submitted: 06/11/2025

- **Doctor of Philosophy (Ph.D.) in Computer Applications**  
Maulana Azad National Institute of Technology, Bhopal  M.P. India  
**Thesis:** *Design of Efficient Artificial Intelligent Deep Learning Models for Human Emotion Detection*  
**Specialization:** Artificial Intelligence, Deep Learning, Natural Language Processing and Affective Computing  
**Supervisor:** Dr. Amit Bhagat  
**Co-supervisor:** Dr. R. Vishnu Priya
- **Master of Computer Applications (MCA)**  
National Institute of Technology, Tiruchirappalli  T. N. India  
**Thesis:** *QR Code-Based Automated Attendance System for Classrooms*
- **Bachelor of Computer Applications (BCA)**  
Devi Ahilya Vishwavidyalaya, Indore  M.P. India

### TEACHING EXPERIENCE (3+ years)

Dec. 2025 | Present

- **Assistant Professor – Computer Applications**  
Galgotias College of Engineering & Technology, Greater Noida  U.P. India

### CONTACT INFO

-  Assistant Professor
-  Galgotias College of Engineering & Technology (GCET)
-  Greater Noida, U.P. India
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-  ResearchInfuser

### TECHNICAL SKILLS

- Advanced: R (Quarto, Rmarkdown, etc.), Zotero, Python, WSL2/ Linux Workflow, DVC, Markdown, MS Office and Git
- Intermediate: Inkscape, Gimp, LibreOffice, PBS and bash/shell
- Basic: C/C++ and JavaScript

### LANGUAGES

- English: Professional Working Proficiency
- Hindi: Native

Aug. 2016

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Apr. 2019

### ● Faculty – Computer Science

Institute for Excellence in Higher Education, Bhopal  M.P. India

*Undergraduate Computer Science teaching across multiple academic sessions, delivering lectures, supervised practicals, conducting evaluations, and mentoring students. Completed a total of 1,948 lectures between 2016 and 2019 as part of continuous teaching engagement.*

**Courses taught:** Introduction to Programming, Linux Programming, Computer Networks

Apr. 2016

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Jun. 2016

### ● Computer Faculty – Computer Applications

Unique Girls College Parasia, Chhindwara  M.P. India

*Undergraduate teaching in Computer Applications, including practical supervision, evaluations, and student academic support.*

**Courses taught:** Introduction to Programming, Computer Fundamentals, Internet and Web Design

Nov. 2015

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Apr. 2016

### ● Assistant Professor – Computer Science

Sony College of Mgmt. and Technology, Chhindwara  M.P. India

*Undergraduate and postgraduate teaching in Computer Science; responsible for lectures, practical sessions, assessments, and examination duties.*

**Courses taught:** Introduction to Programming, Data Structures, Linux Programming

## PUBLICATIONS

### ● Publication Summary

9 as first/corresponding or co-first authors, 1 as co-author

## JOURNAL ARTICLES

Apr. 2025

### ● Expanding AI's Role in Healthcare Applications: A Systematic Review of Emotional and Cognitive Analysis Techniques

Prashant Kumar Nag, Amit Bhagat, R. Vishnu Priya

*IEEE Access*

SCIE · Q1 · IF 3.6 (JCR 2023)

 Read

Nov. 2024

### ● Yolov5-Based Attention Mechanism for Gesture Recognition in Complex Environment

Deepak Kumar Khare, Amit Bhagat, R. Vishnu Priya, Prashant Kumar Nag, Sunil Malviya

*International Journal of Advanced Computer Science & Applications*

Scopus · Q3 · IF 0.9 (2024)

 Read

Sep. 2023

### ● Text-Based Emotion Recognition Using Contextual Phrase Embedding Model

Vishnu Priya R., Prashant Kumar Nag

*Multimedia Tools and Applications*

SCIE · Q1 · IF 3.0 (JCR 2023)

 Read

## CONFERENCE PAPERS

In Press

### ● Leveraging Text Data in Healthcare: A Systematic Review of AI-Driven Emotional Analysis and Patient-Centric Innovations

Prashant Kumar Nag, Amit Bhagat, R. Vishnu Priya, Sunil Malviya, Sanjay Mishra

*International Conference on Healthcare Innovation and Smart Systems (ICHISS 2024) (Conference Presentation)*

AIP Conference Proceedings

Dec. 2023

- **Emotional Intelligence Through Artificial Intelligence: NLP and Deep Learning in the Analysis of Healthcare Texts**  
Prashant Kumar Nag, Amit Bhagat, R. Vishnu Priya, Deepak Kumar Khare  
*2023 International Conference on Artificial Intelligence for Innovations in Healthcare Industries (ICAIHII) (Conference Presentation)*
- **Contextual BI-Directional Attention Flow With Embeddings From Language Models: A Generative Approach to Emotion Detection**  
Prashant Kumar Nag, Vishnu Priya R  
*AIR '21: Proceedings of the 2021 5<sup>th</sup> International Conference on Advances in Robotics (Conference Presentation)*

IEEE Xplore

 Read

Jun. 2021

- **Contextual BI-Directional Attention Flow With Embeddings From Language Models: A Generative Approach to Emotion Detection**  
Prashant Kumar Nag, Vishnu Priya R  
*AIR '21: Proceedings of the 2021 5<sup>th</sup> International Conference on Advances in Robotics (Conference Presentation)*

ACM

 Read



## PREPRINTS

Jul. 2024

- **Advancing Patient Care through Text Data: A Systematic Review of AI, Emotional Analysis, and Patient-Centric Applications in Healthcare**  
Prashant Kumar Nag, Amit Bhagat, R Vishnu Priya

TechRxiv

 Read

Mar. 2024

- **Emotional Intelligence Through Artificial Intelligence : NLP and Deep Learning in the Analysis of Healthcare Texts**  
Prashant Kumar Nag

arXiv

 Read

Dec. 2024

- **A Systematic Review of AI, Emotional Analysis, and Patient-Centric Applications in Healthcare**  
Prashant Kumar Nag, Amit Bhagat, R Vishnu Priya

TechRxiv

 Read



## OTHER PUBLICATIONS

Mar. 2018

- **Impact of Digitization on Indian Economy**  
Prashant Kumar Nag  
*2<sup>nd</sup> National Conference on "Digital Economy: Impact and Challenges" (Conference Presentation)*

IEHE Bhopal



## AWARDS & ACHIEVEMENTS

Jun. 2020

- **National Fellowship for Scheduled Caste Students (2020-21)**  
National Testing Agency  India  
*Awarded by the Ministry of Social Justice and Empowerment, Government of India.*

National Fellowship

Jun. 2019

- **Entrance Examination for Full-Time Ph.D. (with Institute TA)**  
Maulana Azad National Institute of Technology  Bhopal, M.P.  
*Qualified the MANIT Ph.D. Entrance Test (2019) and was selected for the Full-Time Ph.D. programme with Institute Teaching Assistantship (TA).*

Entrance / Competitive Examination

- **National Eligibility Test for Assistant Professor**  
National Testing Agency / University Grants Commission  
*Qualified for Assistant Professor*

Eligibility Examination (UGC-NET)

**Jun. 2020 (53.33%)** **Dec. 2019 (46.67%)** **Jun. 2019 (50.00%)**  
**Dec. 2015 (53.71%)**

- **MCA Entrance Examinations**  
Cleared National Level MCA Entrance Exams

Entrance / Competitive Examinations

**IIT JAM (2011)** **JNU MCA (2011)** **NIMCET (2011, 2012)**  
**BIT MCA (2011): AIR 17** **KIITEE MCA (2011): Rank 15 (SC)**

## EXPERT LECTURES DELIVERED

Oct. 2023	<b>Question Bank Development Workshop</b> Department of Physics & Electronics, IEHE	 Bhopal, M.P.	Delivered session
	Topic: <i>Workshop on Question Bank Development and Outcome-Based Assessment Design</i>		
Feb. 2022	<b>National Workshop on Scilab</b> Institute for Excellence in Higher Education (IEHE)	 Bhopal, M.P.	National Workshop
	Topic: <i>Computation Through Scilab &amp; Solving differential Equations</i>		
Nov. 2019	<b>AICTE Training and Learning (ATAL) Academy FDP</b> Dept. of Mathematics, Bioinformatics and Computer Applications	 Bhopal, M.P.	National FDP
	Topic: <i>Introduction to Virtual Reality: Concepts, Applications, and Future Trends</i>		
Sep. 2019	<b>AICTE Training and Learning (ATAL) Academy FDP</b> Dept. of Mathematics, Bioinformatics and Computer Applications	 Bhopal, M.P.	National FDP
	Topic: <i>Fundamentals of Naive Bayes Classification and Its Applications in Machine Learning</i>		
Aug. 2018	<b>Certificate Course in Cryptography (CCC)</b> Institute for Excellence in Higher Education (IEHE)	 Bhopal, M.P.	
	Topic: <i>Foundation Course on Cryptography: Principles, Algorithms, and Applications</i>		
Feb. 2018	<b>Basic Computer Training</b> RCVP Noronha Academy	 Bhopal, M.P.	National Training
	Topic: <i>Cloud Computing for Educators: Practical Use of Google Drive, Skype, and Cloud-Based Collaboration Tools</i>		
Jan. 2018	<b>NPTL Awareness Workshop and Online Learning</b> NPTL Local Chapter & ICT Cell, IEHE	 Bhopal, M.P.	National Workshop
	Topic: <i>Hands-On Workshop on Configuring and Using Moodle for Online Teaching and Assessment</i>		

## WORKSHOPS & SEMINARS

Sep. 2025	<b>IEEE Authorship and Open Access Symposium</b> IEEE	 Online	International Symposium
Jul. 2022	<b>Workshop on Artificial Intelligence and High-Performance Computing</b> NIT Mizoram & IIT Kharagpur	 Online	National Workshop
Mar. 2020	<b>Six-Day Student Excellence and Learning Program (NPIU-SELP)</b> TEQIP-III at MANIT	 Bhopal, M.P.	National Workshop
Dec. 2019	<b>AICTE Training and Learning (ATAL) Academy Five-Day Workshop</b> Dept. of Electronics and Communication Engineering, MANIT	 Online	National Workshop
Jan. 2018	<b>NPTEL Awareness Workshop and Online Learning</b> NPTEL Local Chapter & ICT Cell, IEHE	 Bhopal, M.P.	National Workshop
Feb. 2017	<b>National Seminar on Emerging Trends in CS and IT (ETCSIT)</b> Department of Computer Science, IEHE	 Bhopal, M.P.	National Seminar



## PROFESSIONAL DEVELOPMENT

Nov. 2019

- **AICTE Training And Learning (ATAL) Academy FDP on “Augmented Reality (AR)/Virtual Reality (VR)”**  
Department of MBC, MANIT 📍 Bhopal M.P.
- **AICTE Training And Learning (ATAL) Academy FDP on “Internet of Things (IoT)”**  
Department of MBC, MANIT 📍 Bhopal M.P.
- **Faculty Induction Programme (FIP) under TLC Project**  
NITTR 📍 Bhopal M.P.
- **Faculty Development Programme on Innovative Teaching Methodologies in the Present Context**  
Department of Computer Science, IEHE 📍 Bhopal M.P.

*National FDP*

*National FDP*

*National FDP*

*National FDP*



## SERVICE & LEADERSHIP



## REVIEWING & EDITORIAL WORK

2025

- **Students' Conference on Electrical, Electronics and Computer Sciences (SCEECS2025)**  
MANIT Student Branch

2024

- **1<sup>st</sup> International Conference on Artificial Intelligence for Innovations in Healthcare Industries (ICAIHI)**  
ICHISS2024 Technical Program Committee
- **4<sup>th</sup> IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES 2024)**  
IIIT Kottayam
- **7<sup>th</sup> International Conference Recent Trends in Image Processing & Pattern Recognition (RTIP2R 2024)**  
IIIT Bhopal

2024

- **Students' Conference on Electrical, Electronics and Computer Sciences (SCEECS2024)**  
MANIT Student Branch

*Meta Reviewer*

*Reviewer*

*Reviewer*

*Reviewer*

*Meta Reviewer*



## EVENT ORGANIZATION & LEADERSHIP

2024

- **6<sup>th</sup> International Conference on communication and Intelligent Systems (ICCIS 2024)**  
Soft Computing Research Society 📍 Bhopal, MP  
*Served as a Session Coordinator in the Technical Session: TSO4 - Emerging Techniques*
- **TechFest (Computer Forum) – Event Coordination**  
Department of Computer Science, IEHE 📍 Bhopal, MP  
*Coordinated the departmental TechFest under the Computer Forum, assisting in event planning, session management, and publicity activities.*

*Session Coordinator*

*Coordinator*



## ACADEMIC ICT CONTRIBUTIONS

2018

- **TechFest Promotional Teaser (IEHE)**  
ICT Cell, IEHE 📍 Bhopal, MP  
*Created the first-ever promotional video for the departmental TechFest.*

*Media Designer*

2017  
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2019

- **Moodle-Based Online Assignment Submission System**  
ICT Cell, IEHE  Bhopal, MP  
*Configured Moodle's assignment and MCQ modules, prepared structured student data, and trained ICT staff and faculty. Adopted by the Departments of Chemistry, Mathematics, and Forensic Science for digital submissions and MCQ assessments.*
- **Google Sites-Based Student Workflow System**  
ICT Cell, IEHE  Bhopal, MP  
*Designed and implemented structured Google Sites workflows to digitize event registration, share schedules and instructions, and significantly reduce paper-based processes across student activities.*

Coordinator

2017  
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2019

## ACADEMIC LEADERSHIP

2017  
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2019

- **Board of Studies – Computer Science**  
Department of Computer Science, IEHE  Bhopal, MP  
*Contributed to curriculum review and syllabus restructuring, aligning course contents with emerging trends in computer science and industry requirements.*

Member

2024

## OPEN SOURCE PROJECTS

2024

- **MANIT Thesis Quarto Extension (manit-thesis)**  
Developer & Maintainer   
*Quarto extension that applies MANIT-approved thesis formatting through a reusable template for fully reproducible dissertation authoring.*
- **MANIT Presentation Template (manit-presentation)**  
Developer & Maintainer   
*Quarto presentation theme (reveal.js/beamer) aligned with MANIT branding, designed for research talks, conference presentations, and academic seminars with automated slide structuring, code highlighting, and reusable layouts.*
- **MANIT Pre-Thesis Template (manit-pre-thesis)**  
Developer & Maintainer   
*Quarto document template for MANIT PhD Pre-Thesis / Synopsis reports with standardized academic sections and automated formatting.*

GitHub

GitHub

GitHub

2024

## REFERENCES

- **Dr. Amit Bhagat**  
Associate Professor, Department of Mathematics, Bioinformatics and Computer Applications  
Maulana Azad National Institute of Technology, Bhopal  M.P. India
- **Dr. R. Vishnu Priya**  
Assistant Professor, Department of Computer Applications  
National Institute of Technology, Tiruchirappalli  T.N. India

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