

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 methods, and rule-based cognitive explanations



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

- Jul. 2012 | Jun. 2015
- **Master of Computer Applications (MCA)**
National Institute of Technology, Tiruchirappalli T. N. India
Thesis: *Automated Attendance using QR Code in Classrooms*
 - **Bachelor of Computer Applications (BCA)**
Devi Ahilya Vishwavidyalaya, Indore M.P India



TEACHING EXPERIENCE

- Aug. 2016 | Apr. 2019
- **Honorary Faculty, Department of Computer Science**
Institute for Excellence in Higher Education (IEHE), Bhopal M.P. India
Undergraduate Computer Science teaching; regular evaluation and practical supervision under the Honorary Faculty role.
Courses taught: Introduction to Programming, Linux Programming, Computer Networks

CONTACT INFO

- Ph.D.—Thesis Submitted
- Maulana Azad National Institute of Technology, Bhopal
- Bhopal, Madhya Pradesh, India
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- prashantnag93.github.io
- 0000-0002-1601-1455
- prashantnag93
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- EhalZtAAAAAJ&hl
- HPE-9262-2023
- 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

Apr. 2016

- **Computer Faculty (Computer Applications)**

Unique Girls College Parasia, Chhindwara

📍 M.P. India

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Jun. 2016

Undergraduate teaching in Computer Applications; supervision of practical sessions and student evaluation.

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

Nov. 2015

- **Assistant Professor (Computer Science)**

Sony College of Management and Technology, Chhindwara

📍 M.P. India

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Apr. 2016

Undergraduate and postgraduate teaching in Computer Science; assessment 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

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)

阅读全文

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)

阅读全文

2023

- **Text-based emotion recognition using contextual phrase embedding model**

Vishnu Priya R., Prashant Kumar Nag

Multimedia Tools and Applications

SCIE · Q2 · IF 3.0 (JCR 2023)

阅读全文

👥 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
ICHISS2024

Conference Presentation

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
ICAIIHI2023

Conference Presentation

阅读全文

2021

- **Contextual Bi-Directional Attention Flow With Embeddings From Language Models: A Generative Approach to Emotion Detection**

Prashant Kumar Nag, Vishnu Priya R

AIR2021

Conference Presentation

阅读全文

PREPRINTS

2024

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

arXiv

 Read

2024

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

TechRxiv

 Read

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

OTHER PUBLICATIONS

2018

- **Impact of Digitization on Indian Economy**
Prashant Kumar Nag
NCDEIC2018

Conference Presentation

AWARDS & ACHIEVEMENTS

Jun. 2020

- **National Fellowship for Scheduled Caste Students (2020-21)**
National Testing Agency (NTA) 
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 (MANIT), Bhopal, India 
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 (NTA) / University Grants Commission (UGC)
 - Jun. 2020 (53.33%): Qualified for Assistant Professor
 - Dec. 2019 (46.67%): Qualified for Assistant Professor
 - Jun. 2019 (50.00%): Qualified for Assistant Professor
 - Dec. 2015 (53.71%): Qualified for Assistant Professor

Eligibility Examination (UGC-NET)

- **MCA Entrance Examinations**
Cleared National Level MCA Entrance Exams
 - IIT JAM (2011): Qualified (SC Category)
 - JNU MCA Entrance Exam (2011): Qualified (SC Category)
 - MCA Entrance Test (BIT) (2011): AIR 17
 - KIITEE Entrance Exam (2011): Rank 15 (SC Category)
 - NIMCET (2011, 2012): Qualified

Entrance / Competitive Examinations

EXPERT LECTURES DELIVERED

Oct. 2023

- **Question Bank Development Workshop**
Department of Physics & Electronics, IEHE 
Topic: Workshop on Question Bank Development and Outcome-Based Assessment Design

Delivered session

Feb. 2022	<ul style="list-style-type: none"> National Workshop on Scilab Institute for Excellence in Higher Education (IEHE) Bhopal, M.P. Topic: <i>Computation Through Scilab & Solving differential Equations</i> 	National Workshop
Nov. 2019	<ul style="list-style-type: none"> AICTE Training and Learning (ATAL) Academy FDP Department of Mathematics, Bioinformatics and Computer Applications Bhopal, M.P. Topic: <i>Introduction to Virtual Reality: Concepts, Applications, and Future Trends</i> 	National FDP
Sep. 2019	<ul style="list-style-type: none"> AICTE Training and Learning (ATAL) Academy FDP Department of Mathematics, Bioinformatics and Computer Applications Bhopal, M.P. Topic: <i>Fundamentals of Naive Bayes Classification and Its Applications in Machine Learning</i> 	National FDP
Aug. 2018	<ul style="list-style-type: none"> Certificate Course in Cryptography (CCC) Institute for Excellence in Higher Education (IEHE) Bhopal, M.P. Topic: <i>Foundation Course on Cryptography: Principles, Algorithms, and Applications</i> 	
Feb. 2018	<ul style="list-style-type: none"> Basic Computer Training RCVF Noronha Academy Bhopal, M.P. Topic: <i>Cloud Computing for Educators: Practical Use of Google Drive, Skype, and Cloud-Based Collaboration Tools</i> 	National Training
Jan. 2018	<ul style="list-style-type: none"> NPTL Awareness Workshop and Online Learning NPTL Local Chapter & ICT Cell, IEHE Bhopal, M.P. Topic: <i>Hands-On Workshop on Configuring and Using Moodle for Online Teaching and Assessment</i> 	National Workshop

WORKSHOPS & SEMINARS

Sep. 2025	<ul style="list-style-type: none"> IEEE Authorship and Open Access Symposium IEEE Online 	International Symposium
Jul. 2022	<ul style="list-style-type: none"> Workshop on Artificial Intelligence and High-Performance Computing NIT Mizoram & IIT Kharagpur Online 	National Workshop
Mar. 2020	<ul style="list-style-type: none"> Six-Day Student Excellence and Learning Program (NPIU-SELP) TEQIP-III at MANIT Bhopal, M.P. 	National Workshop
Dec. 2019	<ul style="list-style-type: none"> AICTE Training and Learning (ATAL) Academy Five-Day Workshop Department of Electronics and Communication Engineering, MANIT Online 	National Workshop
Jan. 2018	<ul style="list-style-type: none"> NPTEL Awareness Workshop and Online Learning NPTEL Local Chapter & ICT Cell, IEHE Bhopal, M.P. 	National Workshop
Feb. 2017	<ul style="list-style-type: none"> National Seminar on Emerging Trends in CS and IT (ETCSIT) Department of Computer Science, IEHE Bhopal, M.P. 	National Seminar

PROFESSIONAL DEVELOPMENT

- Nov. 2019 • **Faculty Development Programme on Trends in Virtual Reality and Augmented Reality for Gaming**
Department of Mathematics, Bioinformatics and Computer Applications,
MANIT  Bhopal M.P.
- Sep. 2019 • **Faculty Development Programme on Analytics of Things and Big Data**
Department of Mathematics, Bioinformatics and Computer Applications,
MANIT  Bhopal M.P.
- May. 2019 • **Faculty Induction Programme (FIP) under TLC Project**
National Institute of Technical Teachers' Training and Research, Bhopal
 Bhopal M.P.
- Sep. 2016 • **Faculty Development Programme on Innovative Teaching Methodologies in the Present Context**
Department of Computer Science, IEHE, Bhopal  Bhopal M.P.

SERVICE & LEADERSHIP

REVIEWING & EDITORIAL WORK

- 2025 • **Students' Conference on Electrical, Electronics and Computer Sciences (SCEECS2025)**
MANIT Student Branch
- 2024 • **1st International Conference on Artificial Intelligence for Innovations in Healthcare Industries (ICAIIHI)**
ICHISS2024 Technical Program Committee
- 2024 • **4th IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES 2024)**
IIIT Kottayam
- 2024 • **7th 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

ACADEMIC ICT CONTRIBUTIONS

- 2018 • **TechFest Promotional Teaser (IEHE)**
ICT Cell, IEHE  Bhopal, MP
Created the first-ever promotional video for the departmental TechFest.
- 2017 | 2019 • **Moodle-Based Online Assignment Submission System**
ICT Cell, IEHE  Bhopal, MP
Implemented digital submission and trained faculty.
- 2017 | 2019 • **Google Sites for student tasks**
ICT Cell, IEHE  Bhopal, MP
Designed and deployed structured Google Sites workflows to eliminate paper-based submissions.

Developer

Coordinator

Coordinator

2017
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2019

EVENT ORGANIZATION & LEADERSHIP

- **TechFest (Computer Forum) – Event Coordination**
Department of Computer Science, IEHE
Assisted in planning, sessions, publicity.

Coordinator



2024

OPEN SOURCE PROJECTS

- **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
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
Quarto document template for MANIT PhD Pre-Thesis / Synopsis reports with standardized academic sections and automated formatting.

 GitHub

2024

 GitHub

2024

 GitHub

REFERENCES

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



M.P. India



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