

PRASHANT KUMAR NAG

Curriculum Vitae

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

EDUCATION

- Jul. 2019
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Thesis Submitted:
06/11/2025
- Jul. 2012
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Jun. 2015
- Jul. 2008
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Jun. 2011
- 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: *Automated Attendance using QR Code in Classrooms*
 - Bachelor of Computer Applications (BCA)**
Devi Ahilya Vishwavidyalaya, Indore M.P. India

TEACHING EXPERIENCE

- Aug. 2016
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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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- 0000-0002-1601-1455
- prashantnag93
- prashantnag93
- Eh1ZtAAAAAJ&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
|
Jun. 2016

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Computer Faculty (Computer Applications)

Unique Girls College Parasia, Chhindwara

M.P. India

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
|
Apr. 2016

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Assistant Professor (Computer Science)

Sony College of Management and Technology, Chhindwara

M.P. India

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

- 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

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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 · Q2 · 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)

IEEE Xplore

Read
- 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 (ICAIIHI) (Conference Presentation)

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 5th International Conference on Advances in Robotics (Conference Presentation)*

Association for Computing Machinery

 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](#)

2nd 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 (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)

Eligibility Examination (UGC-NET)

• **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

MCA Entrance Examinations

Cleared National Level MCA Entrance Exams

Entrance / Competitive Examinations

• 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

EXPERT LECTURES DELIVERED

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

WORKSHOPS & SEMINARS


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

Feb. 2017 • **National Seminar on Emerging Trends in CS and IT (ETCSIT)**
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 Mathematics, Bioinformatics and Computer Applications, MANIT  Bhopal M.P.


National FDP

Sep. 2019 • **AICTE Training And Learning (ATAL) Academy FDP on “Internet of Things (IoT)”**
Department of Mathematics, Bioinformatics and Computer Applications, MANIT  Bhopal M.P.

National FDP

May. 2019 • **Faculty Induction Programme (FIP) under TLC Project**
National Institute of Technical Teachers’ Training and Research, Bhopal  Bhopal M.P.

National FDP

Sep. 2016 • **Faculty Development Programme on Innovative Teaching Methodologies in the Present Context**
Department of Computer Science, IEHE, Bhopal  Bhopal M.P.

National FDP



SERVICE & LEADERSHIP



REVIEWING & EDITORIAL WORK

2025 • **Students’ Conference on Electrical, Electronics and Computer Sciences (SCEECS2025)**
MANIT Student Branch

Meta Reviewer

2024 • **1st International Conference on Artificial Intelligence for Innovations in Healthcare Industries (ICAIIHI)**
ICHISS2024 Technical Program Committee

Reviewer

2024 • **4th IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES 2024)**
IIIT Kottayam

Reviewer

2024 • **7th International Conference Recent Trends in Image Processing & Pattern Recognition (RTIP2R 2024)**
IIIT Bhopal


Reviewer

2024 • **Students’ Conference on Electrical, Electronics and Computer Sciences (SCEECS2024)**
MANIT Student Branch


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.

Developer

2017 |
2019 • **Moodle-Based Online Assignment Submission System**
ICT Cell, IEHE  Bhopal, MP
Implemented digital submission and trained faculty.

Coordinator

2017
|
2019


- **Google Sites for student tasks**
ICT Cell, IEHE  Bhopal, MP
Designed and deployed structured Google Sites workflows to eliminate paper-based submissions.

Coordinator



EVENT ORGANIZATION & LEADERSHIP

2017
|
2019

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

Coordinator



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.

 GitHub

2024

- **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.

 GitHub



2024

- **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



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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