

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
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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
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Jul. 2015
- **Master of Computer Applications (MCA)**
National Institute of Technology, Tiruchirappalli 📍 T. N. India
Thesis: *QR Code–Based Automated Attendance System for Classrooms*
- Jul. 2008
|
Aug. 2011
- **Bachelor of Computer Applications (BCA)**
Devi Ahilya Vishwavidyalaya, Indore 📍 M.P. India

TEACHING EXPERIENCE (3+ years)

- 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*

CONTACT INFO

- 👤 Ph.D. — Thesis Submitted
- 🏛️ Maulana Azad National Institute of Technology, Bhopal
- 📍 Bhopal, Madhya Pradesh, India
- ✉️ prashantnag.workmail@gmail.com
- ☎️ +91 7999459648
- 🏠 prashantnag93.github.io
- 🆔 0000-0002-1601-1455
- 🌐 prashantnag93
- 🐦 prashantnag93
- 🏠 EhaIZtAAAAAJ&hl
- 📄 57408214000
- 🎓 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, including practical supervision, evaluations, and student academic support.

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 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

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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 · 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)

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 (ICAIIHI) (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 5th 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



Mar. 2024

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

Prashant Kumar Nag

arXiv



Dec. 2024

- **A Systematic Review of AI, Emotional Analysis, and Patient-Centric Applications in Healthcare**

Prashant Kumar Nag, Amit Bhagat, R Vishnu Priya

TechRxiv



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



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

Jun. 2020 (53.33%)

Dec. 2019 (46.67%)

Jun. 2019 (50.00%)

Dec. 2015 (53.71%)

Eligibility Examination (UGC–NET)

- **MCA Entrance Examinations**

Cleared National Level MCA Entrance Exams

IIT JAM (2011)

JNU MCA (2011)

NIMCET (2011, 2012)

BIT MCA (2011): AIR 17

KIITEE MCA (2011): Rank 15 (SC)

Entrance / Competitive Examinations



EXPERT LECTURES DELIVERED

Oct. 2023

- **Question Bank Development Workshop**

Department of Physics & Electronics, IEHE



Bhopal, M.P.

Topic: Workshop on Question Bank Development and Outcome-Based Assessment Design

Delivered session

Feb. 2022

- **National Workshop on Scilab**

Institute for Excellence in Higher Education (IEHE)



Bhopal, M.P.

Topic: Computation Through Scilab & Solving differential Equations

National Workshop

- Nov. 2019 ● **AICTE Training and Learning (ATAL) Academy FDP**
Dept. of Mathematics, Bioinformatics and Computer Applications
📍 Bhopal, M.P.
Topic: *Introduction to Virtual Reality: Concepts, Applications, and Future Trends*
- Sep. 2019 ● **AICTE Training and Learning (ATAL) Academy FDP**
Dept. of Mathematics, Bioinformatics and Computer Applications
📍 Bhopal, M.P.
Topic: *Fundamentals of Naive Bayes Classification and Its Applications in Machine Learning*
- Aug. 2018 ● **Certificate Course in Cryptography (CCC)**
Institute for Excellence in Higher Education (IEHE) 📍 Bhopal, M.P.
Topic: *Foundation Course on Cryptography: Principles, Algorithms, and Applications*
- Feb. 2018 ● **Basic Computer Training**
RCVP Noronha Academy 📍 Bhopal, M.P.
Topic: *Cloud Computing for Educators: Practical Use of Google Drive, Skype, and Cloud-Based Collaboration Tools*
- Jan. 2018 ● **NPTL Awareness Workshop and Online Learning**
NPTL Local Chapter & ICT Cell, IEHE 📍 Bhopal, M.P.
Topic: *Hands-On Workshop on Configuring and Using Moodle for Online Teaching and Assessment*

National FDP

National FDP

National Training

National Workshop



WORKSHOPS & SEMINARS

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

International Symposium

National Workshop

National Workshop

National Workshop

National Workshop

National Seminar





PROFESSIONAL DEVELOPMENT

- Nov. 2019 ● **AICTE Training And Learning (ATAL) Academy FDP on "Augmented Reality (AR)/Virtual Reality (VR)"**
Depratment of MBC, MANIT 📍 Bhopal M.P.
- Sep. 2019 ● **AICTE Training And Learning (ATAL) Academy FDP on "Internet of Things (IoT)"**
Depratment of MBC, MANIT 📍 Bhopal M.P.

National FDP

National FDP

- May. 2019 • **Faculty Induction Programme (FIP) under TLC Project**
NITTTR  Bhopal M.P. *National FDP*
- Sep. 2016 • **Faculty Development Programme on Innovative Teaching Methodologies in the Present Context**
Department of Computer Science, IEHE  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*





EVENT ORGANIZATION & LEADERSHIP


- 2024 | 2024 • **6th 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 *Session Coordinator*
- 2017 | 2019 • **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. *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 | 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. *Coordinator*

2017
|
2019


- **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



ACADEMIC LEADERSHIP

2017
|
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



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 & 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.

 GitHub


2024

- **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



REFERENCES

- **Dr. Amit Bhagat**
Associate Professor, Department of Mathematics, Bioinformatics and Computer Applications
Maulana Azad National Institute of Technology, Bhopal  M.P. India

✉ am.bhagat@gmail.com
amitbhagat@manit.ac.in
☎ +91 9827721214

- **Dr. R. Vishnu Priya**
Assistant Professor, Department of Computer Applications
National Institute of Technology, Tiruchirappalli  T.N. India

✉ vissaru@yahoo.co.in
vishnupriya@nitt.edu
☎ +91 9486072557