Dr. N Kishore Babu

Indian Institute of Information Technology Ranchi



I am an assistant professor and completed doctoral studies under the esteemed guidance of Professor Balasubramanian Raman in the Computer Science and Engineering department at IIT Roorkee. My academic prowess has been recognized through a litany of prestigious awards and scholarships, including the Prathibha award in 2006, merit scholarships from the Andhra Pradesh government, and exceptional performance on the EAMCET and GATE tests. My research has garnered widespread recognition and support, including funding from esteemed institutions such as the Ministry of India, DORA IITR, and Microsoft Research. My contributions to the field have been acknowledged through numerous publications in reputable journals and conferences, cementing my position as a trailblazing researcher in the field. In addition to my research achievements, I possess extensive teaching experience and have had the privilege of mentoring numerous graduate and postgraduate students, imparting my knowledge and fostering their academic growth.

I received my M.Tech. and Ph.D. degrees from the Department of Computer Science and Engineering under the guidance of Professor Balasubramanian Raman, Indian Institute of Technology Roorkee. My doctoral study, which focused on Deep Learning-Driven Approaches to Medical Image Computing and Secure Processing, resulted in a successful thesis defense on June 24, 2024. My research findings have been published in several peer-reviewed publications and conference proceedings. Please find more details at https://kishorebabun.github.io/.

Research Interests: Medical Image Processing, Image Segmentation, Image Classification, Machine Learning, Security.

Education

Program	Institution/Board	Year
Ph.D. (Computer Science & Engg.)	Indian Institute of Technology Roorkee Roorkee, India	2019-24
M. Tech. (Computer Science & Engg.)	Indian Institute of Technology Roorkee Roorkee, India	2015-17
B. Tech. (Computer Science & Engg.)	Sri Vidyanikethan engineering college <i>Tirupati, India</i>	2008-12
Intermediate (M.P.C)	Krishna Reddy's Sri Chaitanya College <i>Tirupati, India</i>	2006-08
S.S.C	A.P.R.S Gyarampalli	2000-06

Teaching

- o Database Management System
- o Computer Programming: Concepts and Practices
- o Discrete Mathematics
- o Data Structure and Programming Languages
- o Advanced Database Management System (ADBMS)
- o Digital Logic Design (DLD)
- Machine Learning (ML)
- Deep learning and its Applications
- Object Oriented Programming (OOP)
- o Programming Languages: C, C++, Java, Python.
- WEB TECHNOLOGY: HTML, XML, JAVASCRIPT
- o DATABASE SYSTEM: MySQL, Oracle

- o OPERATING SYSTEM: Windows, Linux
- o DEEP LEARNING: CUDA, TensorFlow, Pytorch, and its compatible libraries

Thesis Supervised

Degree	Thesis Supervised
Ph.D.	1 ongoing
M.Tech.	1 ongoing
B.Tech.	10 completed; 10 ongoing

Experience

- ASSISTANT PROFESSOR, Department of Computer Science and Engineering, IIIT Ranchi. (13-03-2025 to till date)
- o FACULTY, Department of Computer Science and Engineering, IIIT Ranchi. (08-08-2024 to 12-03-2025)
- ASSISTANT PROFESSOR, Department of Computer Science and Engineering, Vignan's Foundation for Science, Technology & Research (Deemed to be University), INDIA. (June 2017 – December 2018)
- **TEACHING ASSISTANT**, Department of Computer Science and Engineering, Indian Institute of Technology Roorkee. (January 2019 December 2023)
- o **REVIEWER**, International Conferences (CVIP, ICE3, CVMI, INDICON, ICONIP, IJCNN, PReMI) and International Journals (Journal of Real-Time Image Processing, Neural Computing and Applications, Neurocomputing, IEEE Open Journal of the Communications Society, Scientific Reports).

Administrative Duties

- o Warden (Block 3), Boy's Hostel SAJHA (Khelgaon Housing Complex), IIIT Ranchi. (July 23, 2025 Till Date)
- o Member, Examination Committee, IIIT Ranchi. (July 23, 2025 Till Date)
- o Member, Institute Disciplinary Committee, IIIT Ranchi. (July 23, 2025 Till Date)
- o Faculty-in-Charge, Student Mentorship & Wellness, IIIT Ranchi. (July 23, 2025 Till Date)
- o Faculty-in-Charge, Newsletter & Magazine, IIIT Ranchi. (July 23, 2025 Till Date)
- o Member, Anti-Ragging Squad, IIIT Ranchi. (July 23, 2025 Till Date)

Awards and Honors

- o Attended and Presented (Offline) my research paper in 14th IEEE International Conference on Semantic Computing (ICSC 2020), which was held on Feb 3-5, 2020, San Diego, California, USA.
- Received Microsoft research funds to attend IEEE International Conference.
- o Got US visa with 10 years validity, i.e, valid up to January 15, 2030.
- o Received Microsoft research funds from IIT Roorkee to attend IEEE International Conference.
- Received Alumni Funds Funds (Travel Grant) from the Indian Institute of Technology Roorkee to present my Research paper at the International Conference.
- o Received M.H.R.D fellowship from the Govt. of India.
- o Got merit scholarship for securing first rank in Secondary School Examination at district level from Indian Bank.
- o Received the Honorarium from District collector for securing the Highest marks in SSC Public Examination.
- Attended as a judge for SOCIOTHON conducted by NSS IIT Roorkee in October 2023.
- o Attended as a judge for NATIONAL SOCIAL SUMMIT conducted by IIT Roorkee from 10-11 Feb 2024.

Patent

Kishore Babu Nampalle and Ankita Kumari, "Al-based vision screening device to detect ocular abnormalities," UK
 Registered Design No. 6449352, June 13, 2025. (Status: Registered)

Visits

National Visits:

- 1. Attended CVIP International conference, MNIT, Jaipur (Rajasthan).
- 2. Participated in conducting the Workshop (virtual) on Digital Image Processing and its Applications (DIPA-2020) at NIT Arunachal Pradesh, India.

International Visits:

- 1. Attended ICSC international conference, California, San Diego, USA. (Offline)
- 2. Attended ICTP certification course in Italy. (Virtual)
- 3. Attended IEEE International Conference on Image Processing at Abu Dhabi, UAE. (Virtual)

Invited Talk

- Delivered a talk (virtually) on ONLINE FRAUDS AND HOW TO AVOID THEM, in National Webinar on Digital Literacy conducted by GOVERNMENT DEGREE COLLEGE, NANDIKOTKUR (Affiliated to Rayalaseema University, Kurnool), Department of Commerce & Department of Computer Applications, Andhra Pradesh, India. (September 11, 2024)
- Delivered a special invited talk (Virtually) on RECENT TRENDS IN STATISTICAL INFERENCE (CLASSICAL MODELS TO EXPLAINABLE AI), In WORLD CONFERENCE ON STATISTICAL INFERENCE (WCSI 2025) (JUNE 29 JULY 01, 2025) Conducted by Bharathiar University, Coimbatore, India, Department of Statistics, Coimbatore, Tamil Nadu, India. (July 01, 2025)

Workshops

- Certified by the International Centre for Theoretical Physics (ICTP) for participation and completion of online Youth in High Dimensions: Machine Learning, High Dimensional Statistics and Inference for the New Generation, 29 Jun -03 Jul, 2020. ICTP certification
- Attended IEEE International Conference on Image Processing on October 25–28, 2020 Abu Dhabi, UAE (Virtual).
 Certificate of participation in ICIP 2020.
- o Attended Fourth International Conference on Computer Vision & Image Processing (CVIP 2019) held in Jaipur, Rajasthan, India.
- Participated in conducting the Workshop (virtual) on Digital Image Processing and its Applications (DIPA-2020) at NIT Arunachal Pradesh, India.

Publications

JOURNALS:....

- 1. **Kishore Babu Nampalle**, Shriansh Manhas and Balasubramanian Raman, Medical Image Security and Authenticity via Dual Encryption, *Applied Intelligence* (*Springer*), Volume 53, pages 20647–20659, 2023. https://doi.org/10.1007/s10489-023-04550-3 [Published, Q2, IF = 5.3]
- 2. **Kishore Babu Nampalle**, Anshul Pundhir, Pushpamanjari Ramesh Jupudi and Balasubramanian Raman, Towards Improved U-Net for Efficient Skin Lesion Segmentation, *Multimedia Tools and Applications* (<u>Springer</u>), Volume 83, pages=1–18, April 2023. https://doi.org/10.1007/s11042-024-18334-5 [Published, Q2, IF = 3.6]
- 3. **Kishore Babu Nampalle**, Pradeep Singh, Shubhi Srivastava, Vivek Narayan Uppala, and Balasubramanian Raman, Medical Imaging Diagnostics via Anisotropic Diffusion in a Resource-Efficient Federated Learning Model, *IEEE Transactions on Emerging Topics in Computational Intelligence (IEEE TETCI)*, September 2024. **[Communicated, Q2, IF = 5.3]**
- 4. **Kishore Babu Nampalle**, Pradeep Singh, Vivek Narayan Uppala, and Balasubramanian Raman, Integrated Wavelet-Enhanced Deep Learning Framework for Point Cloud-Based Image Classification, *ACM Transactions on Multimedia Computing, Communications, and Applications* (*ACM TOMM*), November 2024. **[Communicated, Q1, IF = 5.1]**

CONFERENCES:....

- 1. **Kishore Babu Nampalle**, Balasubramanian Raman, An Efficient Approach for Skin Lesion Segmentation using Dermoscopic Images: A Deep Learning Approach, Proceedings of *The* 5th International Conference on Computer Vision and Image Processing (CVIP), 4-6 December, Allahabad, pp. 430-439, 2020. **(Published)**
- 2. Kishore Babu Nampalle, Balasubramanian Raman, An Efficient Multi-Functional Deep Learning Model for Effective

- Medical Image Classification using Skin Lesion Database, Proceedings of *The* 5^{th} *IEEE International Conference on Multimedia Information Processing and Retrieval (MIPR)*, 2-4 August, USA, pp. 425-429, 2022. **(Published)**
- 3. Nidhi Saxena, **Kishore Babu Nampalle**, Balasubramanian Raman: Semantic segmentation of multispectral images using res-seg-net model, Proceedings of IEEE 14th International Conference on Semantic Computing (ICSC), February 3-5, 2020, San Diego, California, USA. **(Published)**
- 4. Goyal, P., Raj, A., Kumar, P. and **Kishore Babu Nampalle**, 2022, August. Automatic Evaluation of Machine Generated Feedback For Text and Image Data, Proceedings of IEEE 5th International Conference on Multimedia Information Processing and Retrieval (MIPR), August 2-4, 2022, (pp. 413-418), IEEE. **(Published)**
- 5. Deepak Kumar, Pradeep Singh, Richa, **Kishore Babu Nampalle** and Balasubramanian Raman, Integrating Physiological Signals with Dynamical Attention Networks for Personality Trait Analysis, International Joint Conference on Neural Network (IJCNN 2024), June 30 July 5, Yokohama, Japan. **(Published)**

OTHERS:

- 1. **Kishore Babu Nampalle**, Pradeep Singh, Uppala Vivek Narayan, Balasubramanian Raman, Vision Through the Veil: Differential Privacy in Federated Learning for Medical Image Classification, https://doi.org/10.48550/arXiv.2306.17794. **(Preprint)**
- 2. Pradeep Singh, **Kishore Babu Nampalle**, Uppala Vivek Narayan, Balasubramanian Raman, See Through the Fog: Curriculum Learning with Progressive Occlusion in Medical Imaging, https://doi.org/10.48550/arXiv.2306.15574. **(Preprint)**

Contact

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