Faculty Profile

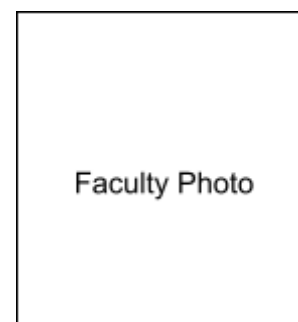## Brief Profile

Faculty Photo

Dr. Azra Nasreen, currently working as an Associate Professor in the Department of Computer Science & Engineering, RV College of Engineering Bengaluru, received PhD, M. Tech and B.E degrees from Visvesvaraya Technological University Belagavi.

Area of interest include video analytics, computer vision and high performance computing. Recently granted with a patent titled "Method, System and Apparatus for Preventing Shoulder Surfing in Secure Electronic Transactions" by the Indian Patent Office. Joined RVCE in 2007, rich academic experience with many industry collaborations, completed several industry sponsored R&D and consultancy projects with leading MNCs such as CISCO, Gnostice Technologies, Citrix, Inferigence Quotient Private limited, Wipro. Authored several articles for international journals, many of them published in Scopus index journals with quartile Q2, Q3 and Q4 indexing. Presented papers in multiple international conferences and has contributed for many book chapters. IEEE Computer Society member, serves as a reviewer for IET Image Processing Journal, Advances in Science, Technology and Engineering Systems Journal, International Conference on Recent Emerging Research in Computing, Information, Communication and Applications, IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, IEEE CONNECT and International Journal of Computing and Digital Systems.

Personal Information

- **Name:** Azra Nasreen
- **Designation:** Associate Professor
- **Department:** Computer Science and Engineering]
- **Email:** azranasreen@rvce.edu.in
- **Phone:** –

Google Scholar / ResearchGate / LinkedIn: [Link if applicable]/ **ORCID: [Link]**

https://scholar.google.com/citations?user=k5XNVrMAAAAJ&hl=en

https://orcid.org/my-orcid?orcid=0000-0001-6868-6377

https://www.linkedin.com/in/azra-nasreen-36b2b325/

Domain of Expertise

Video Analytics, Computer Vision, High Performance Computing

Research Focus

- **Primary Area:** Computer Vision, Machine Learning, Artificial Intelligence, High Performance Computing
- **Allied Areas:**
    - Machine Vision, Internet of Things, Cyber Security, Operating Systems

Academic Qualifications

- **Ph.D.**: Computer and Information Science , VTU, 2020
- **M.Tech**: Computer Science and Engineering, VTU, 2011
- **B.E.**: Computer Science and Engineering, VTU, 2002

Professional Experience

Experience			
S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	Compage IT Solution Private Limited	Programmer	2002 - 2003
2.	Mahajanas College, Mysore	Lecturer	2005-2006
3.	Vidya Vardhaka College of Engineering Mysore	Lecturer	2006 - 2007
4.	RV College of Engineering	Associate Professor	2007 - till Date

Publications & Patents

Journal Publications

1. Zarina Begam K Mundargi, Azra Nasreen, "Comprehensive Survey on Effective and Diverse Attack Detection Techniques in IoT", Journal of Information Systems Engineering and Management, Vol. 10 No. 40, 2025. Scopus indexed Q3
2. Shashank Horakodige Raghavendra, Yashasvi Sorapalli, Nehashri Poojar S. V., Hrithik Maddirala, Ramakanth Kumar P., Azra Nasreen, Neeta Trivedi, Ashish Agarwal, Sreelakshmi, "Multi-camera multi-person tracking with DeepSORT and MySQL", Indonesian Journal of Electrical Engineering and Computer Science, Vol. 38, No. 2, ISSN: 2502-4752. Scopus indexed Q3
3. Abhinav Samaga, Allen Joel Lobo, Azra Nasreen, Ramakanth Kumar Pattar, Neeta Trivedi, Peehu Raj, Koratagere Sreelakshmi, "Enhancing automatic license plate recognition in Indian scenarios", International Journal of Electrical and Computer Engineering (IJECE), Vol. 15, No. 1, February 2025, pp. 365-373, ISSN: 2088-8708, DOI: 10.11591/ijece.v15i1.pp365-373 Scopus indexed Q3
4. Harish A Jartarghar, Kruthi M N, Karunatharaka B, Dr. Azra Nasreen, Shri T. Shankar, Dr. Ramakanth Kumar P, Dr K. Sreelakshmi, "Detection, Identification and Alert of Wild Animals in Surveillance Videos using Deep Learning" , in International Journal of Intelligent Unmanned Systems, July 2024. Scopus indexed Q3
5. Shaikh Mohammed Faiz,Azra Nasreen, and Raj Chaithanya, "Streamlining and Optimizing End to End Fintech Industry Process through RPA", in International Journal of Automation and Smart Technology, Volume 13 Issue 1, September 2023. Scopus indexed Q4 (open access)

6. Poojitha K, Dr. Azra Nasreen, "Aircraft Recognition System Using Deep Learning Based Efficientnet", in Indian Journal of Computer Science and Engineering, e-ISSN: 0976-5166, p-ISSN : 2231-3850, Vol. 13 Issue 5 Sep-Oct 2023.

7. Akshay Kumar, Dr. Azra Nasreen, "Enhanced Intelligent Traffic Prediction in junctions using LSTM", in Gradiva Review Journal, ISSN NO : 0363-8057, Volume 8 , Issue 8, August 2022

8. Vijithathma H V, Dr. Azra Nasreen, "Prediction of Hospital Readmissions of Diabetic Patients using Electronic Medical Record", in Gradiva Review Journal, ISSN NO : 0363-8057, pp 1706-1713 Volume 8 , Issue 7, July 2022.

9. Ashwith A, Anurag Sethuram, Dr. Azra Nasreen, Dr. Shobha G. and Dr. S. S. Iyengar, Deep Learning-Based Object Recognition in Video Sequences, International Journal of Computing and Digital Systems, Volume 11, No.1 (Jan-2022) Scopus indexed Q3

10. Pratheeksha P, Pranav B M, Azra Nasreen, Memory Optimization Techniques in Neural Networks: A Review, International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249-8958 (Online), Volume-10 Issue-6, August 2021.

11. Bhavya M R, Dr. Azra Nasreen, "A Survey on Smart Card Applications", in HTL Journal, Volume 27, Issue 6, June 2021.

12. Bhavya M. R., Vasuprada U. & Dr. Azra Nasreen, "Forecasting Peak and Appliance Level Demand Using Smart Meter Data", International Journal of Computer Science and Information Security, Volume 19 No. 4, April 2021(Web of Science and Scopus)

13. Dr. Azra Nasreen, Dr. Sandhya S, Shyam A, A. Suryanarayanan, "Review on AutoML Methods and Implementations", HTL Journal, Volume 27, Issue 6, June 2021.

14. Tejaswini S, Azra Nasreen, "Survey on Online Log Parsers", International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249-8958 (Online), Volume-10 Issue-5, June 2021.

15. Syed Tameem Ansari, Azra Nasreen, "Data Analysis and Visualization by extracting insights for Efficient Project Planning", International Journal of Computer Sciences and Engineering, Vol.8, Issue.8, August 2020.

16. Kshitij Tiwari, Mallappa Bagi, Dr. Azra Nasreen, Dr. Pratiba D, Jyoti Shetty, "Exploitation of Meltdown on x86", International Journal of Applied Engineering Research, Volume 15, Number 6 (2020) pp. 546-549

17. Lakshmi Narke, Azra Nasreen, "A Comprehensive Review of Approaches and Challenges of a Recommendation System", International Journal of Research in Engineering, Science and Management Volume-3, Issue-4, April-2020 pp 381-384

18. Krupa Sindhu, Krupa Jain, Prof. Sandhya, Dr. Azra Nasreen, "Comparative study and review of principles for dashboard design", International Research Journal of Engineering and Technology, Volume: 07 Issue: 05, May 2020 pp 6335-6338.

19. S Ajithkumar, Anirudh Raghavan, Dr. Azra Nasreen, "Server less Computing a Cloud Technology Revamp", International Research Journal of Engineering and Technology, Volume: 07 Issue: 05 May 2020 Page 3153-3156

20. Soumadeep Basu, Dr. Azra Nasreen, "Study of the Effect of AI on Industries and Employment", International Research Journal of Engineering and Technology Volume: 07 Issue: 04 | Apr 2020 pp 6366-6379

21. Rahul Muppanagouda Patil, Chethan K P, Azra Nasreen, Shobha G, "Robust Foreground Modelling to Segment and Detect Multiple Moving Objects in Videos," International Journal of Electrical and Computer Engineering (IJECE), Vol. 10, No. 2, April 2020. (SCOPUS Q2)

22. Rudresh Waladaunki, Azra Nasreen, "Security and Privacy Preserving of Shared Data in Cloud", IJSRD - International Journal for Scientific Research & Development, Vol. 7, Issue 04, June 2019, pp 28-31.

23. Jayashree Ukkinagatti, Azra Nasreen, Preemy Wilson, "Automation Framework to Validate Interface Gateway Data Dictionary using python Scripting", International Research Journal of Engineering and Technology (IRJET), Volume 06, Issue 06 June 2019, pp 528-530.

24. Azra Nasreen, Dr Shobha G, " Parallelizing Multi featured content based search and retrieval of videos through high performance computing", in Indonesian journal of Electrical Engineering and Computer Science(IAES), Vol 5, No 1, pp 214–219.(SCOPUS Q3)
25. Azra Nasreen, Dr Shobha G, "A comparative study of content based search and retrieval of video sequences", IRACST – International Journal of Computer Science and Information Technology & Security (IJCSITS), ISSN: 2249–9555, Vol.6, No4, July–August 2016, pp 1–3.
26. Vishwanath R, Azra Nasreen, "Survey on Recent Technology of Storage Area Network and Network Attached Storage Protocols", in International Journal of Innovative Research in Electrical, Electronics, Instrumentation And Control Engineering (IJIREEICE), Volume 2, Issue 8, August 2014. ISSN (Print) 2321 – 5526.
27. Darshan K R, Azra Nasreen, Dr. Shobha G, " Detection and Tracking of multiple moving objects in real time" , in International Journal of Advanced Information Science and Technology (IJAIST), Vol.30, No.30, October 2014. ISSN: 2319:2682.
28. Azra Nasreen, Dr. Shobha G, " Key Frame Extraction using Edge Change Ratio for Shot Segmentation" , in International Journal of Advanced Research In Computer and Communication Engineering, Volume 2, Issue 11, November 2013 ISSN (Online): 2278 – 1021 ISSN (Print): 2319 – 5940.
29. Azra Nasreen, Dr. Shobha G, "Key frame Extraction from Videos" in International Journal of Computer Science and Computer Networks (IJCSCN), July 2013,   Volume 3 issue 3, Page no.194–198.
30. Azra Nasreen, Dr. N K Cauvery, Scheduling using Genetic Algorithm, CiiT International Journal of Data Mining and Knowledge Engineering, Vol 3, Page no 565–568, July 2011, Coimbatore, Tamil Nadu.

Conference Papers

1. Manika Kesharwani, Shivabasamma Beli, Dr. Azra Nasreen, Dr. Ramakanth Kumar P, Dr. K. Sreelakshmi, Shri. T Shankar, "Detection of Manhole and Sewage Overflow Using Computer Vision", 8th IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS) 7th to 9th November, 2024, 979–8–3315–0546–2.
2. Aditya Jeppu, Azra Nasreen, Mudit Mittal, Teaching Model Based System Engineering – A Banking Benchmark Problem in 14th Asia Oceania Systems Engineering Conference (AOSEC), 11–14 October 2023 in Bangalore, Pages 135–153, Volume33, IssueS1.
3. Sushma S Ankad , Shivaprasad Rai B , Dr. Azra Nasreen , Dr. Surbhi Mathur ,Dr. Ramakanth Kumar P , Dr. Sreelakshmi K, Object Size Measurement from CCTV footage using deep learning, in IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS) on 16th –18th December 2021.
4. Dr. Azra Nasreen, Shivaranjan K, Praful Kumar, Harish D Shet, "Robust signature verification using deep learning", in International Conference on Recent Trends in Science and Technology(ICRTST), on 17th–18th June 2020 at ATME Mysore, India
5. Azra Nasreen, Pooja I, Christen Dsouza, Dr. Shobha G, "Video Optimization for testing loadbalancing of Application Delivery Controller ", International Conference on Data Sciences , Machine Learning and Applications, on 29th & 30th March, 2019, at CMR Institute of Technology, Hyderabad, Telangana, India.(Springer).
6. Azra Nasreen, Chethan K P, Rahul M Patil, Dr. Shobha G, "Evaluation and Review of Object Tracking Solutions for Video Sequences", in 3rd IEEE International Conference on Inventive Computation Technologies (ICICT–2018) on 15–16 November 2018, Coimbatore, Tamil Nadu, India
7. Azra Nasreen, Vinutha, Dr Shobha G, "Analysis of video content through object search using SVM classifier", in 5th International Conference on Innovations in Electronics and Communication Engineering, July 8–9,2016, Hyderabad, Telangana, India.(Springer).

8. Azra Nasreen, Kaushik Roy, Kunal Roy, Dr Shobha G, "Key frame Extraction and foreground modelling using K-means clustering",in 7th IEEE International Conference on Computational Intelligence, Communication systems and Networks, June 3-4,2015, pp 141-145, Riga Technical University, Latvia.
9. Azra Nasreen, Dr. Shobha G, "Reducing Redundancy in videos using reference frame and clustering techniques of key frame extraction", in proceedings of IEEE International Conference on Circuit, Computing, Communication and Control, IC4i, MSRIT Bangalore.
10. Darshan K R, Azra Nasreen, Dr. Shobha G, " Detection and Tracking of multiple moving objects in real time" , in proceedings of International Conference on Computing, Communication and Energy Systems (ICCCES'14), 8th – 9th August 2014, at MEA Engineering College, Perinthalmanna, Malappuram District, Kerala.
11. Prof. Azra Nasreen, Dr. N K Cauvery, "Job Shop Scheduling Problem using Genetic Algorithm", Vol 2, pp 251-253, Recent Trends in Computing Technology, 29th & 30th April 2011,Computer Science & Engineering Department, R V College Of Engineering, Bangalore.

Books/Book Chapters

1. Analysis of Video Content through Object Search Using SVM Classifier, part of Lecture Notes in Networks and Systems book series (LNNS, volume 7), Springer.
2. Video Optimization for Testing Load Balancing of Application Delivery Controller, Part of the Lecture Notes in Electrical Engineering book series (LNEE, volume 601), Springer.

Patents [Filed / Published / Granted]

1. "Method, System And Apparatus For Preventing Shoulder Surfing In Secure Electronic Transactions" Application No: 201941000753. (**Granted** on 03/03/2023, Patent number 423922).

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

- Development of XLSX Engine-Delphi, Gnostice Technologies Private Limited, 2015-16, Co-PI.
- RTF Encoder Gnostice Technologies Private Limited, 2016-17, PI
- App for Video Optimization Testing, Citrix India Private Limited, 2017-18, PI
- SHARE 2.0 and Crediting as a Service, CISCO India Private Limited, 2019-2020, PI
- SDV in a Box- Global AV Simulator – (Phase-II) – Optimization of the existing Simulator product in terms of Performance & Graphic quality and making it platform independent", Wipro-IISC Research & Innovation Network Consortium, 2020-21, Co-PI
- Development of Perception model for Autonomous Vehicles, Wipro-IISC Research & Innovation Network Consortium (WIRIN), 2021-22, Co-PI.
- Undercarriage camera based vehicle inspection system SEED Grant for Prototype Development, 2022-24, PI.
- Design & Development of Prototypes of the product – AI Image Driven Rice-Grain Analyser" from Swan Sorter Systems Private Limited, ₹4.13 Lakhs, 2024-25, Co-PI.

Ongoing & Completed Consultancy Projects

- Development of PPTX Engine, Gnostice Technologies Private limited, 2014-15, Co-PI.

- Multi-Camera Multi-Target Tracking, Inferigence Quotient Private Limited, Bengaluru, 2022-24, PI
- Office Attendance System based on Facial Recognition, Inferigence Quotient Private Limited, Bengaluru, 2022-24, PI
- Automatic Vehicle Number Plate localization and Reading, Inferigence Quotient Private Limited, Bengaluru, 2022-24, PI.

Professional Memberships

- IEEE

Awards & Recognitions

- Certified as Top Performing Mentor for the NPTEL course on "Introduction to Parallel Programming in OpenMP", Jul-Oct 18,
- Best paper award for the paper titled "Applications of Machine learning algorithms in Smart Grids" in National Level Technical Symposium on Computing and Communication Systems, July 2021.
- Awarded "Certificate of Excellence" for the contribution to the Wipro-IISC Research and Innovation Network – (WIRIN) project "SDV in a Box- Simulator Optimizer" 2021.

Student Supervision

- **Ph.D. Candidates:** [1]
- **M.Tech/M.Sc. Students:** [25]
- **Undergraduate Research Mentees:** [40]

Professional Roles

- ▪ **Reviewer**
- 8th IEEE Conference on Information Communication Technology held at Indian Institute of Information Technology Allahabad, Prayagraj, India.
- Annual International Conference on Recent Trends in Healthcare Innovation (AICRTHI) - 2024, held on 24 & 25 October 2024, Vidyavardhaka College of Engineering, Mysuru.
- 9th International Conference on Electronics, Computing and Communication Technologies, IEEE CONECCT.
- IET Image Processing Journal
- Advances in Science, Technology and Engineering Systems Journal
- International Conference on Recent Emerging Research in Computing, Information, Communication and Applications
- 5th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions
- International Journal of Computing and Digital Systems.
- Session Chair for the National Conference on Computing Technology 2023, RNSIT Bengaluru.
- Technical Committee member for the 8th IEEE International Conference on Computational Systems & Information Technology for Sustainable Solutions [CSITSS-2024]

Teaching

Core Courses: [Current semester]

- CY363AI Applied Cryptography
- HS248AT Universal Human Values

Advanced/Lab Courses:

- Applied Cryptography *Lab*
- Operating Systems Lab
- Parallel Architecture and Distributed Programming Lab
- Skill labs

Professional Roles

Responsibilities

- **Academic:** Coordinator for the Center for Computer Vision Research, PG CSE BoS Coordinator and NBA Coordinator
- **Administrative:** Academic Advisor committee member for PG CSE, Workshop attended by faculty coordinator, Lab Incharge.

External Connect

- Reviewer for the International Journals & Conferences,
- Session Chair for the International Conferences