

Prof. Naveen Aggarwal

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About: Prof. Naveen Aggarwal is working as a Professor in UIET, Panjab University, INDIA and has more than 24 years of teaching experience. He is currently In Charge of Panjab University Incubation Centre and Project Coordinator in Design Innovation Centre established by MoE. He has more than 200 publications and 4 patents are granted to him. He has completed more than 25 research funded projects and 4 software consultancy projects. He is Senior Member of ACM & IEEE.

Academic Qualification

B.E. (CSE.)	2000	Punjab Technical University	Bronze Medalist
M.Tech (CSE)	2002	IIT Kharagpur	2nd in the IIT
Ph.D	2011	GGs IP University, Delhi	

Work Experience: 24 + years

Institution	Designation	Year/Session
UIET, Panjab University, Chandigarh	Professor	Oct 2018 to Till Date
UIET, Panjab University, Chandigarh	Associate Prof	Oct 2015 to Oct 2018
UIET, Panjab University. Chandigarh	Assistant Prof	Feb 2005 to Oct 2015
Punjab Engineering College, Chandigarh.	Lecturer	Feb 2002 to Feb2005

Other Administrative Positions held:

- Coordinator and PI for DIC, Panjab University, Chandigarh since September 2015
- In charge, Panjab University Incubation Centre since March 2024
- Nodal Officer, India AI Mission for PU, Chandigarh
- Nodal officer for PU as Lead Knowledge Institute under Niti Aayog since 2025-26

Total Publications: 200+

International Journals: 78+ (More than 50 SCI/SCIE Publications), International Book chapters: 34+, International Conferences: 55+, National Conferences: 30 (**ORCID: 0000-0003-1549-531X**)

Books Published: 01 by CENGAGE Publishers, 01 by Panjab University Press “Breaking Shells and Soaring High: Startup Journeys”.

Patent Granted: 04, Patent Published: 6

- An Oral Healthcare Education System and Apparatus Thereof, **Indian Patent Granted # 394273**
- AcouAlert: An Automatic Acoustic Event Sensing and Triggering Device, **Indian Patent Granted # 461635**
- Spectral Absorbance Plotter, Indian Design Patent: 450398-01
- Grass Printer: An Automated Multilevel Grass Cutter To Make Character Impression On Grass **Indian Patent Granted #577018**

Total Research Projects/ Grants (Govt/Industry Funded): 20

ME Students Guided: 51, PhD Students Completed/ Thesis Submitted: 13

Expert Lectures Delivered:72,

Workshop/Conference/FDP Organized:96, Workshop participated: 43

Technical Committee Member in Conferences: 82

**Associate Editor: IET Biometrics, Springer Journal of Oral Biology, Frontier Science Journal
Reviewer Panel of Elsevier Pattern Recognition Letters, Elsevier Applied Acoustics and more than
6 Journals.**

Professional Membership

- **Senior Member** IEEE (Membership No: **92663937**), **Senior Member** ACM (Membership No: **9053448**)
- IIT Kharagpur, Lifetime Alumni Membership, ISB CEE Alumni Membership
- Life Member of HEMSI, Life Member of Computer Society of India & Life Member of CSTA
- Senior Member IJCSITA
- Senior Member of International Association of Computer Science and Information Technology

Projects

S.No	Name of Project	Sponsoring Agency	Duration (Period)	Role	Amount Sanctioned
1.	AI-based non-invasive prostate cancer detection using a novel rapid detection kit and MRI-based images.	DST, Chandigarh	1 Year (2025-26)	Co-PI	Rs 4 Lacs
2.	Establishment of AI Data Centre	Vardhman Textiles Pvt Ltd.	2025	PI	RS 1 Crore
3.	Establishment of Entrepreneurship & Employability Hub	RUSA 2.0	2024-25	PI	RS 15 Crores
4.	Development, Validation and Shelf life analysis of Cancer Detection Kit	DST, Chandigarh	1 Year (2024-25)	Co-PI	Rs 2 Lacs
5.	Development of Multimodal and Multilingual Human Emotion Detection System,	IIT Mandi iHub and HCI Foundation	2 Years(2024_2026)	Co-PI	Rs 32.4 Lacs
6.	Handwriting Analysis using Pressure Sensors	RUSA 2.0 Grant, PU	6 Months	PI	Rs 3 lacs
7.	AI-Enabled low-cost handheld device for Writer Verification and Offline Signature Verification	DFSS, MHA, GoI	3 years (2022-2024)	Co-PI	Rs 38 Lacs
8.	Artificial Intelligence based reproducible diagnostic solution for early detection of furcation radiolucency in primary mandibular molars	ICMR	2 Years	PI	Rs 18.34 Lacs
9.	Early Detection of Landfill Fire in Dadu Majra, Chandigarh	DST, Chandigarh	1 Year	Co-PI	Rs 1.2 Lacs
10.	Cyber Security- Challenges under Cyber Space Specially for Women users –Investigating Cyber Initiated	National Commission	1 year (2020-2021)	Co-Investigator	Rs 14.04 Lacs

	Crime against Women Users in Punjab State (SNo:13(02)/2020-21/NCW(RS))	of Women, Delhi			
11.	Landslide Forewarning System for Manikaran, Himachal Pradesh (NGP?LS/Mahesh Thakur/TPN-34319/2019 (C))	DST	3 years (2020-2022)	Co-Investigator	Rs 56 Lacs
12.	Implementation of PyVHR Solution on Cloud	Curio Digital Therapeutics Ltd.	2021	Consultant	Rs 1.26 lacs
13.	Rootworkz learning Platform	PSCS& T (DST)	1 Year (2020-2021)	Principal Investigator	Rs 50,000
14.	Design and Development of Recruitment Portal	Technozone Solutions Pvt. Ltd.	2021	Consultant	Rs 65000/-
15.	Development of Website for BG Unified Solutions	BG Unified Solutions Pvt. Ltd.	2021	Consultant	Rs 1.25 lacs
16.	Development of Quadcopter with thermal camera in Compliance with DGCA Guidelines	Space Jam Technologies	1 year 2020-2021	Consultant	Rs 2 lacs
17.	Design Innovation Centre: Subtheme: Traffic Sensing & Information Technologies	MHRD	11Years 2015-2026	Principal Investigator	Rs 10 Crores for full project
18.	Design and Development of Tinkerable projects for School Students	Saksham Creative Education Pvt. Ltd.	1 Year 2018	Consultant	Rs 1.25 lacs
19.	CARTS: Communication Assisted Road Transport System (ITRA/i5(6i)/Mobile/CARTS/o2/2015)	ITRA, Media Lab Asia (DEITY)	5 Years (2013-2018)	Principal Investigator	Total=1.28 Crores (RS 12.6 lacs for UIET)
20.	Armor Wire Tester	Oceaneering Pvt. Ltd.	2016	Joint Investigator	40 Lacs
21.	A tool based Effort Estimation Model	Infosys Technologies Ltd.	2006	Principal Investigator	1 Lacs
22.	SMS Based Result Information System	Panjab University	2007	Principal Designer	10000
23.	Speaker Recognition and Identification for VoIP	MHRD under TEQIP-II	2013-2014	Principle Investigator	1.20 lacs
24.	Subjective Assessment of Video quality for validation of objective metrics	MHRD under TEQIP-II	2013-2014	Principle Investigator	1.33 lacs

25.	TEQIP-II Implementation in various institutes at Chandigarh	World Bank through MHRD	2012-2015	Consultant at State Level
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Industrial projects Completed

- Effort Estimation Model developed for Axede Corp USA in 2008.
- Content Management System development for Infosys Technologies Ltd (Patents obtained by Infosys technologies Ltd.) in 2006.
- Cost Effort Estimation tool for Birlasoft technologies in 2008-09.
- “Intelligent Keyword Extraction System in 2018 for IDS Infotech Limited.

Certifications:

1. June 08, 2015 – The Data Scientist’s Toolbox (Johns Hopkins University, Coursera)
2. July 02, 2015 – R Programming (Johns Hopkins University, Coursera)
3. October 02, 2019 – End-to-End Machine Learning with TensorFlow on GCP (Google Cloud, Coursera)
4. April 19, 2020 – Neural Networks and Deep Learning (deeplearning.ai, Coursera)
5. April 28, 2020 – Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization (deeplearning.ai, Coursera)
6. May 02, 2020 – Structuring Machine Learning Projects (deeplearning.ai, Coursera)
7. May 09, 2020 – Convolutional Neural Networks (deeplearning.ai, Coursera)
8. May 15, 2020 – Sequence Models (deeplearning.ai, Coursera)
9. May 15, 2020 – Deep Learning Specialization (5 Courses) (deeplearning.ai, Coursera)
10. October 27, 2020 – Build Basic Generative Adversarial Networks (GANs) (deeplearning.ai, Coursera)
11. 2024 – AI Python for Beginners: Basics of AI Python Coding (DeepLearning.AI)
12. 2024 – Function-calling and Data Extraction with LLMs (Nexusflow, DeepLearning.AI)
13. 2024 – Open Source Models with Hugging Face (DeepLearning.AI, Hugging Face)
14. February 12, 2025 – How Transformer LLMs Work (DeepLearning.AI, Jay Alammar & Maarten Grootendorst)
15. February 15, 2025 – Attention in Transformers: Concepts and Code in PyTorch (DeepLearning.AI, StatQuest)
16. March 16, 2025 – AI Agents in LangGraph (DeepLearning.AI, LangChain & Tavily)

Awards & Honors:

- **Cash Award by Panjab University VC**, Rs10,000 awarded for coordinating the SMS-based result and attendance verification project at UIET. December 11, 2009
- ACM ICPC Asia Chennai First Round - Honorable Mention, As coach of UIET Panjab University team in the International Collegiate Programming Contest. 2015
- **Elsevier Reviewer Recognition**, Certificate of Reviewing for Pattern Recognition Letters journal. December 2017
- **ACM Senior Member**, Honored with the designation by the Association for Computing Machinery. January 8, 2020

- **ACM Senior Member Recognition** (Published List), Listed among ACM Senior Members in official ACM records. 2019
- **IEEE Senior Member**, Recognized as Senior Member in good standing through December 2021. 2020-2021
- **Senate Felicitation** - Panjab University, Recognized for granted patent "An Oral Healthcare Educational Apparatus and System Thereof". April 26, 2022
- **Certificate of Appreciation** - IIC Regional Meet, UIET Panjab University secured 3rd position in Exhibition Stall at IIC Regional Meet, Chandigarh. 2023
- Elsevier SDG Recognition, Open access publication linked to UN Sustainable Development Goals. 2023
- **Patent Appreciation** - Panjab University, Patent granted for "Vision System with Camera" (Indian Patent No. 386190-001). 2025 (Financial Year 2023-24)
- **Patent Appreciation** - Panjab University, Patent granted for "Acoualert: An Automatic Acoustic Event Sensing and Triggering Device" (Indian Patent No. 461635). 2025 (Financial Year 2023-24)
- **Mentor of Award-Winning Startup** "RootWorkz Learning", selected as winner of Eureka 2020-21 by IIT Bombay with prize of Rs 2.5L.
- **Winner of NDIN Innovation Challenge for COVID-19** by INDIAN Innovation Challenge for COVID-19 Indian Institute of Science, Bangalore.
- **Top Downloaded Paper Award** by Wiley International Pvt Ltd. For Year 2018-19
- Appreciated by Punjab School Education Board, Mohali for development of Data Mining and Analytics Software.
- **Procurement coordinator and consultant** at State Project Facilitation Unit of UT Chandigarh for TEQIP-II project being implement in Technical institutes of Chandigarh (Total Amount = Rs 30 Crore). From Feb 2012 to Jan 2014.
- **Outstanding Faculty Contributor** award by Infosys Technologies Pvt. Ltd.
- Successfully Completed a Sabbatical project "**Tool based Estimation Model Development**" at Infosys Chandigarh in August 2006.
- **Imparted training to more than 1000 personnel** to use Electronic Voting machines during 2004 Lok Sabha Elections of Govt of India.
- **CMS Effort Estimation Model** is developed in collaboration with BirlaSoft Corp., India
- **Appreciation letter from Dr. M.P. Ravindra**, Vice President and head Education and Research Deptt, Infosys Technologies Ltd. for Sabbatical project undertaken at Infosys technologies.
- **Appreciation Letter from CEO, AXEDE Corp**, USA for developing CMS Effort Estimation Model for their organization.
- Awarded Bronze medal for standing third in graduation by Punjab Technical University.

Other Achievements:

- Project In-Charge of Panjab University Incubation Centre since March 2024 and established 5 Pre-incubators worth Rs 15 Crores. 2024
- Established AI Data Centre Lab at DIC, Panjab University worth Rs 1 Crore. 2023
- Established PCB Fabrication and Design Lab at DIC, Panjab University worth Rs 1.8 Crore. 2023

- **Best Paper Award** – A Sustainable Approach of Speculative Parallelism to achieve Energy Efficiency in Proceedings of 1st International Conference on Technological Advancement: Stepping towards Sustainable Development, SVIET, Banur, Mohali. February 8–9, 2023
- **Best Paper Award** – Gunshot Detection and Classification using a Convolution-GRU based approach in International Conference on Emerging Trends and Technologies on Intelligent Systems (ETTIS-2022), organized by MEITY, CDAC Noida in association with Petroleum-Gas University of Ploiesti, Romania. 2022
- **Best Paper Award** – SiamLBP: Exploiting texture discrepancies for DeepFake Detection in the 4th International Conference on Machine Intelligence and Signal Processing (MISP 2022). March 12–14, 2022
- **Best Paper Award** – SysCom 2021, Paper titled “Efficient Speculative Parallelization Architecture for Overcoming Speculation Overheads” awarded Best Paper at SysCom 2021, New Delhi. December 2021
- **Best Poster Award** – ACM COMPUTE 2018, Poster titled “Automatic Triggering of Acoustic Sensing by Human Activity Recognition using Accelerometer” awarded First Prize at Chitkara University. October 2018
- **Best Paper Award** of Rs 25,000/- for Best Paper Prize for paper “Automatic Triggering of Acoustic Sensing by Human Activity Recognition using the Accelerometer” in ACM COMPUTE. October 2018
- Setup PU DATA set Server (pudataset.puchd.ac.in) to provide Storage as a Service (SaaS) for online management and dissemination of data using DSPACE Server solution. 2018
- Setup servers to provide Infrastructure as a Service (IaaS) by providing virtual machines on Cloud. 2018
- Setup two Design Innovation Centre Labs (Sensor Lab and Computer Vision Lab) in CSE Department. 2018
- Technical Committee Member of IEEE International Conference on Recent Advances in Engineering and Computational Sciences, Panjab University. December 2016
- Technical Committee Member of more than 80 International conferences such as ICIIP-2013, 2014, Confluence (2014–2018), ICCTD 2011 etc. 2013–2018
- Technical Committee Member of IEEE International Conference on Recent Advances in Engineering and Computational Sciences, organized by Panjab University. March 6–8, 2013
- Joint Admission Committee Member to organize BE Admissions during session 2013–14. 2013
- Organizing Secretary of 3rd International Conference on Biomedical Engineering and Assistive Technologies (BEATS-2014). February 14–15, 2014
- **Awarded Best Paper** Prize for paper “Analysis of Lung Segmentation and Boundary Correction Techniques on Lung CT Image” in CHASCON. 2012
- **Awarded Best Paper Prize** for paper “Real Time Human Activity Recognition Using Shape-from-Motion Reconstruction” in CHASCON. 2008
- Assisted PEC, Chandigarh, IT Department to get ISO 9001 certification. 2003
- NBA Core Team Member to implement NBA regulations in UIET and prepared NBA proposal for UIET. (Year not specified, likely mid-2010s)
- Consultant and Nodal Officer for Procurement, Finance and Management in State Project Facilitation Unit, UT Chandigarh for TEQIP-II. (Year not specified, likely mid-2010s)

- Technical Program Committee Member of International Journal of Computing and Digital Systems. (Year not specified)
 - Delivered more than 50 Expert Lectures at various forums, refresher courses, FDPs, short-term courses, and workshops. (Ongoing)
 - Attended more than 50 different Workshops, STCs, Seminars, Symposiums, and Conferences. (Ongoing)
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List of Patents:

1. An Oral Healthcare Education System and Apparatus Thereof, Indian Patent Granted No 394273
2. Acoualert: An Automatic Acoustic Event Sensing And Triggering Device, Publication Date : 10/01/2020, Application No.202011000013 A. Indian Patent Granted # 461635
3. Grass Printer: An Automated Multi Level Grass Cutter To Make Character Impression On Grass, Publication Date 20/03/2020, Publication Type INA, Application Number 202011009410 A. Indian Patent Granted #577018
4. Spectral Absorbance Plotter, Indian Design Patent: 450398-01
5. RFID Based Multipurpose Traffic Light System, Publication Date : 24/11/2017, Application No.201711039173 A,
6. An apparatus and a method for capturing an evidence Dynamically and analyzing the same, Publication Date : 05/07/2024, Application No. 202311018214 A.

Selected Publications

Research Publications in Journals

1. Sohanvi, P., Aggarwal, N. & Kaur, N. SiamID: multi-perspective keypoint fusion for person re-identification. *Multimed Tools Appl* 85, 136 (2026). <https://doi.org/10.1007/s11042-026-21289-4>
2. Priyanka, Mamta Juneja, Naveen Aggarwal, Manoj Kumar Jaiswal, Priyanka Rana, Artificial intelligence-based approaches for preprocessing, segmentation, and classification in dental radiographs for furcation detection: A comparative analysis, *Computer Science Review*, Volume 60, 2026,100890,ISSN 1574-0137
3. Gupta, Anand, and Naveen Aggarwal. "Special issue on application of artificial intelligence in oral and craniofacial care." *Journal of Oral Biology and Craniofacial Research* 15.6 (2025): 1874-1875.
4. Abhinav Chopra, Anand Gupta, Naveen Aggarwal, Artificial intelligence in dental age estimation- applications, technological advances and legal aspects: A narrative review, *Journal of Oral Biology and Craniofacial Research*, Volume 15, Issue 6,2025, Pages 1534-1538, ISSN 2212-4268,
5. Sharma V, Aggarwal N, Kaur N (September 10, 2025) Cross-Model Implementation of Emotion Recognition Systems on Indian Datasets . *Cureus J Comput Sci* 2 : es44389-025-08677-x. doi:<https://doi.org/10.7759/s44389-025-08677-x>
6. Thakur, P., N. Kaur, N. Aggarwal, and S. Singh. 2025. " A Comprehensive Review of Unimodal and Multimodal Emotion Detection: Datasets, Approaches, and Limitations." *Expert Systems* 42, no. 9: e70103.

7. Mary Chatterjee, Kirti Hooda, Manjeet Kaur, Krishan Kumar Chauhan, Saumya Bharti, Garima Joshi, and Naveen Aggarwal, Design and Analysis of a Low-Cost Device for Detecting Prime Factors of Fire Ignition in Environment, *ACS Omega* 2025 10 (21), 21040-21052
8. Juneja, M., Aggarwal, N., Saini, S.K. et al. A comprehensive review on artificial intelligence-driven preprocessing, segmentation, and classification techniques for precision furcation analysis in radiographic images. *Multimed Tools Appl*, 21467–21520 (2025).
Mahesh Thakur, Raj Kiran Dhiman, Sukhvir Singh, Naveen Aggarwal, Franck Bourrier; Development of Rockfall Early Warning System (REWS) for Prediction of Rockfall Hazard in Manikaran, NW Himalaya, India. *Jour. Geol. Soc. India* 2025; 101 (4): 437–445.
9. Enhancing DDoS defense in SDN using hierarchical machine learning models, *Journal of Network and Computer Applications*, Volume 239, 2025, 104168, ISSN 1084-8045,
10. Kingra, S., Aggarwal, N. & Kaur, N. Assessing deepfake detection methods: a comparative evaluation on novel large-scale Asian deepfake dataset. *Int J Data Sci Anal* (2025).
11. M. K. Surehli, N. Aggarwal, G. Joshi, and H. Nayyar, “Semantic Segmentation of Plant Structures with Deep Learning and Channel-wise Attention Mechanism”, *JTIT*, vol. 99, no. 1, pp. 56–66, Feb. 2025
12. Harsh Ahlawat, Naveen Aggarwal, Deepti Gupta, Automatic Speech Recognition: A survey of deep learning techniques and approaches, *International Journal of Cognitive Computing in Engineering*, Volume 6, Pages 201-237, 2025, ISSN 2666-3074
13. Sharma, S., Sharma, M., Garg, N., Kaur, A., Sapra, G., Aggarwal, N., & Goswami, J. K. (2024). Design and Development of Sensing Unit for Wire Rope Tester. *IETE Journal of Research*, 71(1), 211–223. <https://doi.org/10.1080/03772063.2024.2409716>
14. StaffyKingra, Naveen Aggarwal, Nirmal Kaur, SFormer: An end-to-end spatio-temporal transformer architecture for deepfake detection, *Forensic Science International: Digital Investigation*, Volume 51, 2024, ISSN 2666-2817.
15. StaffyKingra, Naveen Aggarwal, Nirmal Kaur, SiamNet: Exploiting source camera noise discrepancies using Siamese Network for Deepfake Detection, *Information Sciences*, Volume 645, 2023, ISSN 0020-0255.
16. Singh, L., Aggarwal, N. & Singh, S. PUMAVE-D: panjab university multilingual audio and video facial expression dataset. *Multimedia Tools and Applications* , 2022.
17. StaffyKingra, Naveen Aggarwal, Nirmal Kaur, “LBPNet: Exploiting texture descriptor for deepfake detection”, *Forensic Science International: Digital Investigation*, Volume 42, 2022, 301452, ISSN 2666-2817, IF=1.805.
18. Kumar, S, Singh, SK, Aggarwal, N, Gupta, BB, Alhalabi, W, Band, SS. An efficient hardware supported and parallelization architecture for intelligent systems to overcome speculative overheads. *Int J Intell Syst.* 2022; 1- 27.
19. Garg M., Aggarwal N., Minimal Feature Analysis for Isolated Digit Recognition for varying encoding rates in noisy environments, (2022) arXiv, DOI: 10.48550/arXiv.2208.13100
20. Kingra, S., Aggarwal, N. & Kaur, N. Emergence of deepfakes and video tampering detection approaches: A survey. *Multimedia Tools and Applications* (2022).
21. Nabi ST, Kumar M, Singh P, Aggarwal N, Kumar K. A comprehensive survey of image and video forgery techniques: variants, challenges, and future directions. *Multimedia Systems.* 28, 939–992, 2022 Jan 30:1-54.
22. Mankirat Kaur, Sarbjeet Singh, Naveen Aggarwal, “Missing traffic data imputation using a dual-stage error-corrected boosting regressor with uncertainty estimation”, *Information*

- Sciences, Volume 586, Pages 344-373,ISSN 0020-0255, 2022, SCI Indexed, Impact Factor=8.023
23. Sudhakar Kumar, Sunil Kr. Singh, Kriti Aggarwal & Naveen Aggarwal, Evaluation of automatic parallelization algorithms to minimize speculative parallelism overheads: An experiment, *Journal of Discrete Mathematical Sciences and Cryptography*, Taylor and Francis 24:5, 1517-1528, 2022,Online ISSN: 2169-00651.
 24. Sukhveer Kaur, Krishan Kumar, Naveen Aggarwal, Gurdeep Singh, A Comprehensive Survey of DDoS Defense Solutions in SDN: Taxonomy, Research Challenges, and Future Directions, In *Elsevier Computers & Security*, Volume 110, November 2021, ISSN 0167-4048.
 25. RigzinAngmo, Naveen Aggarwal, VeenuMangat, Anurag Lal, and Simarpreet Kaur. 2021. An Improved Clustering Approach for Identifying Significant Locations from Spatio-temporal Data. *Wireless Personal Communications* (2021), 1–25.
 26. Singh, P., Dutta, M. & Aggarwal, N. Hybrid Meta-heuristic Approach for Workflow Scheduling in IaaS Cloud. *Arab J SciEng* (2021). <https://doi.org/10.1007/s13369-021-05774-6> Impact Factor: 1.71, (SCIE Indexed)
 27. Kaur, Sukhveer, Krishan Kumar, and Naveen Aggarwal. "A review on P4-Programmable data planes: Architecture, research efforts, and future directions." *Computer Communications* (2021), Volume 170, 15 March 2021, Pages 109-129, SCIE Indexed.
 28. Singh, R.D., Aggarwal, N. Optical flow and pattern noise-based copy-paste detection in digital videos. *Multimedia Systems* (2021) 27, 449–469 (2021). Electronic ISSN: 1432-1882, Print ISSN:0942-4962, Impact Factor=1.7 (SCI Indexed).
 29. Kumar, S., Singh, S. K., Aggarwal, N. (2020). Role and Importance of High Performance Computing for Digital India and Self-reliant India. *Self reliant India and Technology Teaching (Special Issue)*, *VigyanGarima Sindhu (UGC Care Journal)*, published by CSTT, Ministry of Education (Higher) Education Department) GOI, Issue-113, pp. 170-185. (UGC CARE Indexed)
 30. Dinesh Vij, Naveen Aggarwal. Transportation Mode Detection Using Cumulative Acoustic Sensing and Analysis, Springer, *Frontier of Computer Science.*, Vol:15, Issue: 1,November 2020, Electronic ISSN:2095-2236, Print ISSN: 2095-2228. (SCIE Indexed), Impact Factor=1.387
 31. S. Kaur, K. Kumar and N. Aggarwal, "Security Threats On Data-Control Plane Communication Channel in SDN", *Advances in Mathematics: Scientific Journal* 9 (2020), no.6, 4031–4038, ISSN: 1857-8365 (printed); 1857-8438 (electronic) (SCOPUS Indexed).
 32. Singh, Gurpreem, Ajay Mittal, and Naveen Aggarwal. "ResDNN: Deep Residual Learning for Natural Image Denoising." *IET Image Processing* (2020).
 33. Singh, R., Puri, H., Aggarwal, N. et al. An Efficient Language-Independent Acoustic Emotion Classification System. *Springer Arab J SciEng*, 45, 3111–3121 (2020), issn=2191-4281, Impact Factor: 1.71, (SCIE Indexed).
 34. Handa, Rohit, C. Rama Krishna, and Naveen Aggarwal. "Efficient privacy-preserving scheme supporting disjunctive multi-keyword search with ranking." *Concurrency and Computation: Practice and Experience* Vol 32, Issue 2, ISSN: 15320626 Online ISSN:1532-0634, Impact Factor: 1.447, (SCIE Indexed), July 2019.
 35. AnujDimri, Harsimran Singh, Naveen Aggarwal, Bhaskaran Raman, K. K. Ramakrishnan, and Divya Bansal. 2019. *BaroSense: Using Barometer for Road Traffic Congestion Detection*

- and Path Estimation with Crowdsourcing. *ACM Transaction on Sensor Networks*, 16, 1, Article 4 (November 2019), 24 pages.
36. Ranjit Singh, Naveen Aggarwal, A distortion-agnostic video quality metric based on multi-scale spatio-temporal structural information, *Elsevier Signal Processing: Image Communication*, Volume 74, 2019, Pages 299-308, ISSN 0923-5965,2019, ISSN 0923-5965.
 37. Aparna, Yukti Bhatia, Rachna Rai, Varun Gupta, Naveen Aggarwal, AparnaAkula, "Convolutional neural networks based potholes detection using thermal imaging", *Journal of King Saud University - Computer and Information Sciences*, 2019, ISSN 1319-1578.
 38. RohitHanda, C. Ramkrishna, Naveen Aggarwal, Searchable Encryption: A Survey on Privacy-Preserving Search Schemes on Encrypted Outsourced Data" in *Wiley International Journal of Concurrency Computation Practice and Experience*. 2019; ISSN: 15320626 Online ISSN:1532-0634, 2019.
 39. RohitHanda, C. Ramkrishna, Naveen Aggarwal, "Document clustering for efficient and secure information retrieval from cloud" in *Wiley International Journal of Concurrency Computation Practice and Experience*. 2019;e5127. ISSN: 15320626 Online ISSN:1532-0634, Impact Factor: 1.114, (SCIE Indexed), December 2018.
 40. RohitHanda, C. Ramkrishna, Naveen Aggarwal, "Keyword Binning-Based Efficient Search on Encrypted Cloud Data", in *Springer Arabian Journal for Science and Engineering*, issn=2191-4281", September 2018, Impact Factor: 1.518, (SCIE Indexed).
 41. RohitHanda, C. Ramkrishna, Naveen Aggarwal, "An efficient approach for secure information retrieval on cloud", *Journal of Intelligent & Fuzzy Systems (SCIE Indexed)* Impact Factor 1.004, vol. 34, no. 3, pp. 1345-1353, August 2018, ISSN 1064-1246 (P), ISSN 1875-8967 (E)
 42. Dinesh Vij, Naveen Aggarwal, Smartphone based traffic state detection using acoustic analysis and crowdsourcing, *Applied Acoustics*, Volume 138, September 2018, Pages 80-91, ISSN 0003-682X,
 43. Kaur A., Aggarwal, Naveen, et al., "Non-destructive Evaluation and Development of a New Wire Rope Tester Using Parallely Magnetized NdFeB Magnet Segments", *Springer Journal of Nondestructive Evaluation*, Volume:37, Issue: 3, ISSN: 0195-9298.
 44. Singh, Lovejit and Singh, Sarbjeet and Aggarwal, Naveen, "Improved TOPSIS method for peak frame selection in audio-video human emotion recognition", *Springer, Multimedia Tools and Applications*, July 2018, Volume, Issue, pp 1-32, Print ISSN:1380-7501,Online ISSN: 1573-7721, 2018.
 45. Anish Jindal, Naveen Aggarwal, Savita Gupta, "An Obstacle Detection Method for Visually Impaired Persons by Ground Plane Removal Using Speeded-Up Robust Features and Gray Level Co-Occurrence Matrix", *Pattern Recognition and Image Analysis*, June 2018, Vol. 28, No. 2, pp. 288-300, ISSN 1054-6618.
 46. Ravi Bhandari, Bhaskaran Raman, K. K. Ramakrishnan, DeepthiChander, Naveen Aggarwal, Divya Bansal, MahimaChoudhary, NishaMoond, Aneesh Bansal, and Megha Chaudhary. "CrowdLoc: Cellular Fingerprinting for Crowds by Crowds". *ACM Transaction on Sensor. Networks*. 14, 1, Article 4 (January 2018), 36 pages,ISSN:1550-4859 EISSN:1550-4867
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2. AI-Based Automated Detection of Furcation Radiolucency in Dental Radiographs via EfficientNet and Classical ML Classifiers at 2nd International Conference on Artificial

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3. Cross Model Implementations of Emotion Recognition System Indian Languages datasets presented at International Conference on Emerging Trends in Engineering and Management , ICETEM 2025, on 19 May 2025 organized at Universite Grenoble Alpes France.
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Edited Publications:

1. Deep learning techniques for cancer classification using microarray gene expression data, Surbhi Gupta Manoj K. Gupta Mohammad Shabaz Ashutosh Sharma, Frontiers in Physiology, Published on 30 Sep 2022
2. Early and accurate detection of melanoma skin cancer using hybrid level set approach, Mahmoud Ragab Hani Choudhry Mohammed W. Al-Rabia Sami Saeed Binyamin Ahmed A. Aldarmahi Romany F. Mansour, Frontiers in Physiology, Published on 30 Sep 2022

3. Short-pulsed micro-magnetic stimulation of the vagus nerve, HongbaeJeong Annabel Cho Ilknur Ay Giorgio Bonmassar, *Frontiers in Physiology*, Published on 30 Sep 2022
4. Medical ultrasound image speckle reduction and resolution enhancement using texture compensated multi-resolution convolution neural network, Muhammad Moinuddin Shujaat Khan Abdulrahman U. Alsaggaf Mohammed Jamal Abdulaal Ubaid M. Al-Saggaf Jong Chul Ye, *Frontiers in Physiology*, Published on 30 Sep 2022
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