Faculty Profile



Dr. RN. Karthika, MTech., Ph.D, (PDF)
Assistant Professor (S.G) – IT, IIC Coordinator,
Heading Hackathon for SEC,
Prime Project Incharge - SCOFT

HIGHLIGHTS:

- Number of Journal Publications:
  - SCI – 02
  - SCOPUS -17
  - Non-Scopus - 04
- H-Index: 03
- Project Funding Received: 01
- Patents Published: 14
- Patents Granted: 02

PROFESSIONAL LINKS:

- Scopus ID: 57350983300
- Scopus Link: https://www.scopus.com/authid/detail.uri?authorId=57350983300
- Google Scholar ID: _V7uzmUAAAAJ
- Anna University Faculty ID: 2669291990
- AICTE Faculty ID: 1-9319238454
- Anna University Supervisor ID: -NA-
- LinkedIn: https://www.linkedin.com/in/dr-karthika-rn-197715104/

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 6 years 2 months 21 days
- Industrial Experience: -NA-

INTERNATIONAL EXPOSURE:

- Facilitator for Google Cloud Career Readiness the track is “Associate Cloud Engineer” (Google Cloud Career Launchpad Program) Saveetha Engineering College (Feb’24 – Sep’24).

- Google Cloud Facilitator for Saveetha Engineering College (March-July 2022).

AREA OF SPECIALIZATION:

- Cloud Computing
- Big Data – Hadoop and its Ecosystem Tools
- Blockchain
- GenAI.

Ph.Ds AWARDED WITH DETAILS: -NA-

S:No	Name of Scholar	Title of Thesis	Year of Completion	Full Time/Part Time

Ph.Ds GUIDING: -NA-

- **Full Time Scholars:**
- **Part Time Scholars :**

SPONSORED RESEARCH / FUNDING APPLIED / CONSULTANCY:

- The project titled **"Sustainable Development index based stable coin: Eco coin bridging finance and sustainability"** has been funded by "Student Project Scheme 2023-24 by Tamil Nadu State Council for Science and Technology (TNSCST).
- The "Advancement in Brain-Computer Interface In Neuro Rehabilitation of Cognitive Science Using AI" project has been applied to "DST- WISE KIRAN".

PATENTS PUBLISHED/GRANTED:

S. No	Patent Title	Application Number	Patent Country	Status
1.	System For Categorizing Medications with Different Trade Names and Identical Compositions	202441092159 A	India	Published
2.	Indigenous Technological Crypto Currency Investigation Tools with Multi-Blockchain Platform Support	202341050892 A	India	Published
3.	Medi locker: A Blockchain Solution for Comprehensive Medical Records.	202341050891 A	India	Published
4.	Digital Twins Model of Industrial Production Control Management	202341066345	India	Published

	Using Deep Learning Techniques.			
5.	Green Connect: Empowering Waste Recycling and Trading for A Sustainable Future.	202341056065 A	India	Published
6.	Comprehensive Healthcare Information and Telemedicine Web Application	202341059432 A	India	Published
7.	Agriculture Drone with Pesticides Spraying Mechanism.	202341036261 A	India	Published
8.	Secure view: Smart IoT Lintel Guard - Window to Door Security	202341059452 A	India	Published
9.	Empowering The Visually Impaired: The Innovative Smart Cane Navigation System	202341059440 A	India	Published
10	Integrated Deep Learning Framework for Proactive Predictive Maintenance in Manufacturing	202341066346	India	Published
11	Blockchain-Enabled Device for Enhancing Computer Network Safety	Design: 381141-001	India	Published
12	IoT Based Process Control for Copper Metal Coating on Steel	202041046673	India	Published
13	An Artificial Intelligence-based Organic LED Farming during Post Covid 19	2021101469	Australia	Granted

COURSES CERTIFIED:

- **"Introduction to Generative AI"** – Authorized by Google Cloud and offered by Coursera.
- **"Generative AI: Boost Your Cybersecurity Career"** – Authorized by IBM and offered by Coursera.
- **"A Tour of Google Cloud Hands-on Labs"** – Authorized by Google Cloud and offered by Coursera

ACHIEVEMENTS AND AWARDS:

- Served as a Mentor for Team Vitality wins in the **Smart India Hackathon (SIH 2024)**
- Facilitator for Google Cloud Career Readiness the track is "Associate Cloud Engineer" (Google Cloud Career Launchpad Program) Saveetha Engineering College (Feb'24 – Sep'24).

- Awarded Best Teacher of the Academic Year 2023-2024 by Saveetha Engineering College
- Awarded Excellence in eLearning Leadership Award 2023 (ELLA) (29 June 2023 to 29 June 2033)
- Google Cloud Facilitator for Saveetha Engineering College (March-July 2022).
- Awarded Edvocate Leadership Award 2022 by CertifyMe (25-05-2022).
- Mentor for IBM-NAALAYA THIRAN (11-06-2022 to 01-12-2022)
- Mentor for NPTEL Online Certification Course (Jul-Dec 2022).
- Evaluator for Smart India Hackathon (SIH 2022)

SPECIAL SESSIONS DELIVERED:

- Acted as a Resource person for the 5- Days Online Faculty Development Program on "Exploring the Frontiers of Artificial Intelligence: Theory, Application & Ethics" organized by Department of Information Technology Prathyusha Engineering College on 8th -12th July 2024.
- Delivered Expert Lecture on "Blockchain: The New Technology of Trust" a One Day Workshop organized by the Department of Quantitative Engineering SIMATS on 27 Jan 2024.
- Delivered Expert Lecture and Hands-on Practice Sessions on "Recent Trends in Data Sciences" an ONLINE Six Day AICTE-AU STTP organized by the Department of Information Technology MIT Campus Anna University on 06.01.2022 and 08.01.2022.
- Delivered Expert Lecture and Hands-on Practice Sessions on "Blockchain Technologies: Applications and Challenges" on 22nd and 23rd of February 2020 in 3G Institute of Research & Policy Studies Pvt Ltd – IIT Madras Research Park.
- Delivered a Lecture on "Blockchain Technology" on the 20th of November 2019 organized by the Department of Master of Computer Applications at Sree Vidyanikethan Engineering College in Tirupati.
- Delivered Expert Lecture and Hands-on Practice Sessions on "Blockchain Technologies: Applications and Challenges" on the 20th and 21st of August 2019 in a one-week AICTE Sponsored STTP organized by the Department of Computer Science and Engineering at Sree Vidyanikethan Engineering College in Tirupati.

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

International Conference:

- "Perlustration on Techno Level Classification of Deduplication Techniques in Cloud for Big Data Storage", 2016 IEEE Eighth International Conference on Advanced Computing (ICoAC). Page No: 206-211.

Webinars & Virtual FDP Attended:

1. Participated in Two Days Online Workshop on " Data Analytics and Machine Learning through Zero Coding", From 26-06-2023 to 27-06-2023 and Organized by the Division of Mathematics, School of Advanced Sciences, VIT Chennai.

2. Participated in 5 Days FDP titled " Digital Agriculture - High Throughput Plant Phenotyping", from 24-07-2023 to 28-07-2023 conducted by the Centre for Advanced Data Science, VIT Chennai.

3. Participated in NPTEL + Workshop Certificate - Online Workshop "Cybersecurity and its role in Healthcare today", organized by IITM on 13-10-2023.

4. Participated in One Week National Level Faculty Development Program on "Cloud Infrastructure (AWS)", from 21-08-2023 to 25-08-2023 and organized by ERODE SENGUNTHAR ENGINEERING COLLEGE (AUTONOMOUS), TAMIL NADU in collaboration with Brainovision Solutions India Pvt Ltd and All India Council for Technical Education (AICTE).

5. Participated in 5 Days National Level Faculty Development Program on "Machine Learning and Deep Learning", from 11-10-2023 to 15-10-2023 and organized by SRM Institute of Science and Technology, Ramapuram Campus.

6. Participated in One Week Virtual Faculty Development Program on " Emerging Research Trends in Block Chain & Data Science", from 08-05-2023 to 12-05-2023 organized by the Department of Computer Science and Engineering, Dr.M.G. R Educational and Research Institute, India.

7. Participated in Two Weeks International FDP on "Computer Vision and Natural Language Processing", from 08-08-2022 to 18-08-2022 and organized by the Department of Information Technology, Easwari Engineering College.

8. Faculty Development Program "Machine Learning & AI" a 5-day program, from 05-06-2021 to 09-06-2021 and it was organized by Raja Bahadur Venkata Rama Reddy Women's College in collaboration with Dataspace Security Pvt Ltd, Kolkata, India.

9. Participated in Online ATAL Elementary FDP “Cyber Security & Cryptography: Trends and Technologies” from 04-10-2021 to 08-10-2021 at Indian Institute of Information Technology Design and Manufacturing, Kancheepuram.

10. Participated In the Online Course “Machine Learning to Deep Learning: A Journey for Remote Sensing Data Classification” This Online Course Was Conducted From 05-07-2021 to 09-07-2021 (Total course duration was = 13 hours and 30 minutes) and was jointly organized by the Department of Space, Government of India, ISRO and IIRS Dehradun Enrolment No: 2021821062344
11. Participated in Six Days AICTE Sponsored Phase - IV STTP on "Writing and Publishing High Impact Research Publications and Scientific Documents" organized by the Department of Information Technology, Rajalakshmi Engineering College from 02-11-2021 to 07-11- 2021 in online mode.
12. Participated & completed successfully AICTE Training and Learning (ATAL) Academy Online FDP on "Quantum Computing" from 2020-10-5 to 2020-10-9 at the Centre for Development of Advanced Computing (C-DAC)

13. Participated and completed AICTE Training and Learning (ATAL) Academy Online FDP on "Blockchain" from 17-08-2020 to 21-08-2020 at Mepco Schlenk Engineering College.
14. Participated in a 40-hour Online Faculty Development program titled "Data Science for ALL" jointly organized by Electronics and ICT Academies- NIT Warangal, IIITDM Jabalpur, and NIT Patna from 27th July – 8th August 2020.
15. Participated in International Webinar on "5G Network- Overview" organized by Department of ECE in Mahindra College of Engineering on 3rd July 2020.
16. Participated in Webinar on "Deep Learning and Data Visualization" organized by the Department of Computer Science and Engineering on 26.06.2020 in St. Mother Theresa Engineering College.
17. Participated in one day FDP "Introduction to Blockchain" organized by the Department of Computer Science and Engineering on 6th June 2020 in Rajalakshmi Engineering College.
18. Participated in the Faculty Development Program on "Research Methodology: Tools & Techniques", organized by IILM College of Engineering & Technology from 18th May 2020 to 22nd May 2020.

Seminars / Workshops Attended:

1. Attended Five-Day AICTE Training and Learning (ATAL) Academy FDP National Workshop on "Blockchain Application Development using Hyperledger and Ethereum".
2. Attended Five-Day ISEA Workshop on Blockchain Technologies which was organized and conducted by Department of Computer Science and Engineering and Department of Information Science and Technology, College of Engineering, Guindy Campus, Anna University.
3. Attended workshop on "How to Write Research Papers Effectively" jointly organized by University Library Anna University, Chennai & Elsevier INDIA at College of Engineering, Guindy Campus, Anna University.
4. Attended workshop on Internet of Things sponsored by UGC-DRS-II(SAP-II) in the Department of EE, MIT Campus, Anna University-Chennai.
5. Attended workshop on Data Analytics Using 'R'-Programming conducted by Department of Computer Technology, MIT Campus, Anna University - Chennai.
6. Attended Certificate Course on Intellectual Property Rights Procedures & Best Practices – Centre for Intellectual Property Rights (CIPR) & Tamil Nadu Technology Development (TNTDPC)and Promotion Centre of Confederation of Indian Industry (CII).
7. GIAN- Design of Algorithms for Big Data Analytics in University of Hyderabad -12 Days
8. Attended a two-day workshop on Big Data and Cloud Tools, Department of Computer Technology, MIT Campus-Anna University.
9. Attended workshop conducted by UGC DSA-II Sponsored Four-Day Workshop on Cloud Computing – Architecture, Approaches and Applications, Department of Computer Science Anna University-Chennai.
10. I have cleared Cloud Computing Foundation which is certified by EXIN with 83%.

11. International Workshop on Cloud Computing organized by Department of Computer Technology –MIT Campus, Anna University in association with the University of Melbourne, Australia and Manjra soft, Australia.

12. Regional Training Programme on URKUND- An Anti-Plagiarism Detection Tool jointly organized by Anna University and NFLIBNET Centre in Collaboration with URKUND, Sweden & eGalactic, Pune.

13. Workshop on Research Article Writings and Patent – Department of Documentation and Information Science, CSIR-CLRI, Adyar in association with Indian Society for Education and Environment (ISEE) and AASMR, Chennai.

14. Author Workshop jointly organized by Springer & Anna University, Chennai.

PROFESSIONAL MEMBERSHIPS:

Member Body Name	**Member Ship ID**	**DOI**
ACM Professional Member	6785006	01-2023
Institute for Engineering Research and Publication – IFERP	PMIN28945637	31-10-2019
International Association of Engineers - IAENG	226990	24-12-2018
International Computer Science and Engineering Society (ICSES)	3090	13-12-2018

OTHER DETAILS (If any):

Hackathon/ Datathon Organized

- Organized RAP Hackathon which was conducted by Rapid Acceleration Partners.
- SPOC for Caterpillar Hackathon 2025 where we bagged II Runner Up Position.
- SPOC for L&T Techgium 2026.
- SPOC for MSME 2025 and 2026.
- SPOC for SIH 2026.
- SPOC for SIH for 2025 and 2 Finalist, where 1 Team Won the SIH - Hardware Edition.
- SPOC for IBM Z Datathon organized and Conducted an IN-Person Datathon in collaboration with IBM and Shooting Stars Foundation on 17th Oct 2026.
- SPOC for IBM Z Datathon organized and Conducted an IN-Person Datathon in collaboration with IBM and Shooting Stars Foundation on 11th Oct 2025.
    - SEC Bagged 1st & 2nd Place and Learners of SEC won Cash Prizes of 500$ & 250$.
- SPOC for IBM Z Datathon organized and Conducted an IN-Person Datathon in collaboration with IBM and Shooting Stars Foundation on 19th Oct 2024.
    - Globally SEC Bagged 3rd Place and In-Person SEC Bagged 1st & 2nd Place and Learners of SEC won Cash Prizes of 100$.
- SPOC for IBM Z Datathon organized and Conducted an IN-Person Datathon in collaboration with IBM and Shooting Stars Foundation on 21st Oct 2023.
    - Globally SEC Bagged 3rd Place and In-Person SEC Bagged 1st Place and Learners of SEC won various Cash Prizes.
- SPOC for Kavach and Organized Internal Kavach 2023 in Saveetha Engineering College.
- Coordinated Internal Smart India Hackathon (SIH) 2023.

Webinars / Workshop Organized

- Coordinated a Workshop on "Unlocking the Fundamentals: A Comprehensive Guide to Hacking" during Event Day II on 25th Oct 2024.
- Coordinated a Guest Lecture on "Introduction to Software Development Lifecycle in Enterprises & how DevOps improves developer productivity" during Event Day II on 25th Oct 2024
- Coordinated a hands-on Workshop on SecDevOps during Dresetein'23 on 25th Oct 2023.
- Coordinated a Two-day hands-on Workshop on Cybersecurity and Ethical Hacking during Dresetein'22 on 14th and 15th Nov 2022.
- Coordinated a Hands-on Workshop on Blockchain and Smart Contracts on 03rd Nov 2022
- Coordinated a Webinar on "Evolution of Artificial Intelligence in Real World and Game Development" on 26th June 2021
- Coordinated a Webinar on "What's Next?!" on 10th June 2021
- Coordinated a Webinar on "Ignite the Engineer in You: Try & Fly" on 7th June 2021.

Journal Publications:

- **Karthika, R.N**., Valliyammai, C., UmaRani, V. et al. A blockchain-enabled scalable and secure architecture for cloud big data storage using sharding and swarming. Sci Rep 16, 21831 (2026). https://doi.org/10.1038/s41598-026-51254-y

- **RN Karthika**, C.Valliyammai, M Naveena, "Phish Block: A Blockchain Framework for Phish Detection in Cloud", Computer Systems Science and Engineering(CSSE), vol. 44, no.1, pp: 777-795,2023, doi:10.32604/csse.2023.024086.(SCI).

- Manikandan D, Valliyammai C, **Karthika RN,** "Blockchain-based Secure Big Data Storage on Cloud", International Journal of Recent Technology and Engineering (IJRTE), Vol : 9 Issue :4, Nov-2020,Page No: 37-45.

- **Karthika.RN,** Vijay Anand.P, M.Rajesh Khanna, "Secure Hierarchical Temporal Access Control in Cloud Computing," International Journal of Computer Science and Mobile Computing, Vol.3, no.2, pp. 66-70,Feb 2014.

- **Karthika.RN**, Vijay Anand. P, "CIA Framework Designed for Confirming Culpability of Information in Cloud," International Journal of Computer Science and Information Technologies, Vol.5, no.1, pp. 450-455, 2014.

- Security Scenarios over Cloud Computing through Espousing Multi-Cloud Structure in IJIRCCE published in volume 2 special issue 1 March 2014.

Book Chapters – IEEE and Academic Press

- R.N. Karthika, M. Sanjay Kumar, Ali Kashif Bashir, N. Kishore, D. Nandhini, Chapter 10 - Cybersecurity and data privacy vulnerability analysis for smart-self-powered sensors, Editor(s): Rajesh Kumar Dhanaraj, Prithi Samuel, Malathy Sathyamoorthy, Balamurugan Balusamy, Vinayakumar Ravi, Self-Powered Sensors, Academic Press, 2025, Pages 159-169, ISBN 9780443137921, https://doi.org/10.1016/B978-0-443-13792-1.00013-4 .

- Govindaraj Venkatesan, Rajendra Narasimman Karthika, Ali Kashif Bashir, Chapter 5 - Digital Twins Model of Industrial Production Control Management Using Deep Learning Techniques, Editor(s): Rajesh Kumar Dhanaraj, Balamurugan Balusamy, Prithi Samuel, Ali Kashif Bashir, Seifedine Kadry, Digital Twins in Industrial Production and Smart

Manufacturing: An Understanding of Principles, Enhancers, and Obstacles, IEEE Press & Wiley,2024, ISBN: 9781394195336, https://doi.org/10.1002/9781394195336.ch5 .

Springer Book Chapters

- Gunanithi, S., Ilavarasan, S., Karthika, R.N. (2024). Revolutionizing Osteosarcoma Diagnosis: A Comparative Analysis of Deep Learning Models for Precise Bone Cancer Detection Using Multi-Modal Medical Imaging. In: Chaudhry, S.S., Surendiran, B., Raj, C.V. (eds) Proceedings of the First Artificial Intelligence Summit on Smart Sustainable Society. AISSS 2023. Lecture Notes in Electrical Engineering, vol 1259. Springer, Singapore. https://doi.org/10.1007/978-981-97-7592-7_16.

- Hariram, B., **Karthika, R.N**., Anandasayanam, K., Maheswara Pandian, G. (2023). Dynamic E-Authentication Attendance System Using QR Code and OTP. In: Rathore, V.S., Piuri, V., Babo, R., Ferreira, M.C. (eds) Emerging Trends in Expert Applications and Security. ICETEAS 2023. Lecture Notes in Networks and Systems, vol 682. Springer, Singapore. https://doi.org/10.1007/978-981-99-1946-8_29 (Scopus - UGC Journal).

- Kishor Kumar Sethy, LM Varalakshmi, E Rajkumar, Radha Raman Pandey,**RN Karthika**, P Vijayakumar.(2022) "IoT based speech recognition system" in AIP Conference Proceedings, vol.2393, no.1, pp.020096, Published by AIP Publishing LLC. https://doi.org/10.1063/5.0074140 (Scopus - UGC Journal).

- Chandra Priya J., **Karthika R.N.**, Suresh Kumar K., Valarmathie P. (2022) BlockSIoT: a Blockchain-Based Secure Data Sharing in SIoT. In: Gupta D., Polkowski Z., Khanna A., Bhattacharyya S., Castillo O. (eds) Proceedings of Data Analytics and Management. Lecture Notes on Data Engineering and Communications Technologies, vol 91. pp. 687-700, Springer, Singapore. https://doi.org/10.1007/978-981-16-6285-0_55 (Scopus - UGC Journal).

- Sridharan J, Valliyammai C., **Karthika R.N**., Nihil Kulasekaran L. (2019) Data De-duplication Using Cuckoo Hashing in Cloud Storage. In: Nayak J., Abraham A., Krishna B., Chandra Sekhar G., Das A. (eds) Soft Computing in Data Analytics. Advances in Intelligent Systems and Computing, vol 758. Springer, Singapore. https://doi.org/10.1007/978-981-13-0514-6_67 (Scopus - UGC Journal).

- **Karthika R.N**, Valliyammai C., Abisha D. (2018) Data Deduplication and Fine-Grained Auditing on Big Data in Cloud Storage. In: Reddy Edla D., Lingras P., Venkatanareshbabu K. (eds) Advances in Machine Learning and Data Science. Advances in Intelligent Systems and Computing, vol 705. Springer, Singapore. https://doi.org/10.1007/978-981-10-8569-7_38 (Scopus - UGC Journal).

Recognition

Sl. No.	Name of Award / Recognition	Awarding Agency	Year
1.	Education Excellence Award	OneYes Startup Fest 2K26.	2026
2.	Recognition - Reviewer	New Generation Computing- Springer	2023
3.	Recognition - Reviewer	Journal of Intelligent & Fuzzy Systems	2019- Till now
2.	Recognition - Reviewer	Journal of Supercomputing -Springer	2022
3.	Recognition - Reviewer	Concurrency and Computation Practice and Experience - Willey	2021
4.	Recognition - Reviewer	Wireless Personal Communication An International Journal - Springer	2021
5.	National Advisory Board Member	IOT and Intelligent Apps - IFERP	2020
6.	Scientific Advisory Board Member	1st International Conference on Renewable Energy and Green Technology (ICREGT–2020) - Virtual Conference organized by SRM Institute of Science and Technology (SRM IST), Ghaziabad	2020