Faculty Profile

Dr. R. Augustian Isaac , M.E., Ph.D
Associate Professor

HIGHLIGHTS:

- Number of Journal Publications: 23
- H-Index: 03
- Patents Published: 02

PROFESSIONAL LINKS:

- Scopus ID: 57189763043
- Scopus Link: https://www.scopus.com/authid/detail.uri?authorId=57189763043
- Google Scholar ID:
  https://scholar.google.com/citations?hl=en&user=PTcGqJkAAAAJ&view_op=list_works&sortby=pubdate
- Anna University Faculty ID: 268606
- AICTE Faculty ID: 4369857697
- LinkedIn: https://www.linkedin.com/in/dr-augustian-isaac-91495a91

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 24 Yrs
- Industrial Experience: Nil

AREA OF SPECIALIZATION:

- Artificial Intelligence & Machine Learning

- GenAI application development

- NLP, Language model

- Energy saving in WAN, WSN

- Green Computing & Quantum Intelligence

PATENTS PUBLISHED/GRANTED:

- **1.   Multi-Layered Cybersecurity Framework Using Machine Learning Algorithms", Application No.202441027153 A, Published on 12.04.2024. Patent Application Publication India**

● 2. "The Effect of application of the children learning in science model (CLIS) on science Process skills" Application No.202442061955 published on 15.08.2024. Patent Application Publication India

Research Article Publication

1. Zero-Knowledge Cross-User De-Duplication for Big Data Storage on ClouD,
Karthika, RN; Valliyammai, C; Sundaravadivel, P; Isaac, R Augustian, **Year**: 2024

2. A Very Compact and Highly Decoupled Four Element Antenna for n79 Band Application

- **Authors**: Vadivel, P Sundara; Isaac, R Augustian; Pandian, P Senthil; Kumar, D Rajesh
- **Publication**: International Journal of Microwave & Optical Technology
- **Volume**: 19.0, Issue 1
- **Year**: 2024

3. Advancements in Neural Network Architectures for Image Recognition in Computer Vision Systems

- **Authors**: Deepa, A; Nandhini, R; Kannammal, G Rajendra; Isaac, R Augustian; Abualigah, Laith; Varalakshmi, S
- **Publication**: Journal of Electrical Systems
- **Volume**: 20.0, Issue 7s, Pages 2693-2703
- **Year**: 2024

4. Analyzing IoT Smart System Application and Environment by Using Simulated Annealing Techniques

- **Authors**: Pandian, P Senthil; Sundaravadivel, P; Isaac, R Augustian; Hemavathy, P; Vinothkumar, ES; Ramal, P Janaki
- **Publication**: Journal of Theoretical and Applied Information Technology
- **Volume**: 102.0, Issue 8
- **Year**: 2024

5. CNN-based Smart Activity Recognition for Elderly and Physically Disabled

- **Authors**: Hemavathy, P; Alhaji, Haitham; Yuvaraj, D; Sundaravadivel, P; Alnuaimi, Saif Saad; Isaac, R Augustian
- **Publication**: Journal of Electrical Systems
- **Volume**: 20.0, Issue 3s, Pages 267-275
- **Year**: 2024

6. Control and Adaptation of Context Awareness in Pervasive Computing

- **Authors**: Isaac, R Augustian

7. Design and Development of OCR Integrated Automated Writing Machine

- **Authors**: Debnath, Aritri; Vyjayanthi, Matam; Chaitra, N; Ghosh, Raksha
- **Publication**: 2020 Third International Conference on Smart Systems and Inventive Technology (ICSSIT)
- **Pages**: 1207-1212
- **Year**: 2020
- **Publisher**: IEEE

8. Design and Development of an Automated Writing Machine

- **Authors**: Satheeshkumar, P; Challa, Ganesh; Ramesh, M; Mahesh, M; Reddy, N Sreeramula

9. Dynamic Power Management Through Clustering in Wireless Sensor Network

- **Authors**: Isaac, R Augustian; Lakshmi, M
- **Publication**: Journal of Engineering and Applied Sciences
- **Volume**: 14.0, Issue 2, Pages 583-588
- **Year**: 2019

10. Dynamic Power Management an Integrated Approach for Lifetime Enhancement of Wireless Sensor Network

- **Authors**: Isaac, R Augustian; Lakshmi, M
- **Publication**: Journal of Network Communications and Emerging Technologies (JNCET)
- **Volume**: 7.0, Issue 10
- **Year**: 2017

11. Enhanced Novelty Approaches for Resource Allocation Model for Multi-Cloud Environment in Vehicular Ad-Hoc Networks

- **Authors**: VS, Nici Marx; Sundaravadivel, P; Elangovan, D
- **Year**: 2024

12. Exploring The Factors Influencing The Effectiveness Of Digital Marketing In Changing Environment; A Theoretical And Empirical Investigation

- **Authors**: TP, Krishna Kumar; Malhotra, Priyanka; Isaac, R Augustian; Balasubramanian, D
- **Publication**: Educational Administration: Theory and Practice
- **Volume**: 30.0, Issue 4, Pages 7488-7493
- **Year**: 2024

13. Homework Writing Machine

- **Authors**: Isaac, R Augustian; Singh, Amit Kumar; Tamta, Prateekshit; Singh, Gaurav
- **Publication**: IJARIIE

- **Volume**: 4.0, Issue 5
- **Year**: 2018

14. Intelligent Systems and Applications in Engineering

- **Authors**: Alnuaimi, Saif Saad; Rasheed, Bilal Hikmat; Yuvaraj, D; Sundaravadivel, P; Isaac, R Augustian

15. Modified Dynamic Power Management an Integrated Approach for Lifetime Enhancement of Wireless Sensor Network (M-DPMM)

- **Authors**: Isaac, R Augustian; Lakshmi, M

16. Optimizing Credit Card Fraud Detection with Random Forests and SMOTE

- **Authors**: Sundaravadivel, P; Elangovan, D; Raj, KD Krishna; Rahul, LRVV Lokesh; Raja, R
- **Year**: 2024

17. Secured E-Banking System Using Artificial Intelligence

- **Authors**: Isaac, R Augustian; Chaturvedi, Prakhar; Gareja, Pradip; Grover, Rohan
- **Publication**: Int J Emerg Technol Eng Res (IJETER)
- **Volume**: 6.0
- **Year**: 2018

18. Sign Language Interpreter

- **Authors**: Isaac, Mr R Augustian; Gayathri, S Sri
- **Year**: 2018

19. Spoofing Detection for Fingerprint, Palm-Vein, and Facial Recognition Using Deep Representation

- **Authors**: Isaac, R Augustian; Kathera, Aditya; Venkatachalam, KH; Raj, Moturu Tarun; Gokulnath, G

20. Studies on Dynamic Power Management and Routing Techniques in Wireless Sensor Network

- **Authors**: Isaac, R Augustian; Lakshmi, M

21. Voice Technology & Speech Recognition in ELT

- **Authors**: Gandhi, S Mercy Gnana

22. Web Image Search Reranking Using CBIR

- **Authors**: Tech, V Vinitha M; Jagadeesan, J

2. Patents

1. **Generative Adversarial Network (GAN)-Based Synthetic Data Generation for Privacy Preserving Machine Learning**
   - **Status**: Published
   - **Application Date**: 2 August 2024
   - **Co-Investigators**: Saveetha Engineering College, E. Poovannan, P. Sankar, R. Augustian Isaac, C. Rajarajachozhan, et al.
2. **The Effect of Application of the Children Learning in Science Model (CLIS) on Science Process Skills**
   - **Status**: Applied
   - **Application Date**: 14 August 2024
   - **Co-investigators**: Dr. R. Augustian Isaac, Dr. T.V.S. Padmaja, Dr. H. Selvi, Dr. Pratima Mishra, et al.

3. Workshops Conducted

1. **Bootstrap Mastery: Enhancing Frontend Skills for Full Stack Engineers**
   - **Event Date**: 28 March 2024
   - **Resource Person**: Dr. Sathish Kumar M, Assistant Professor, Hindustan Institute of Technology and Science, Chennai
2. **Ethereum Odyssey**
   - **Event Date**: 28 March 2024
   - **Resource Persons**: Venkadesh E, Nitishwar S, Sathish R (Final Year IT Students, SEC)
3. **Unlocking Potential: Exploring Survey Sparrow Career Roles**
   - **Event Date**: 28 March 2024
   - **Resource Persons**: Gokul Nath A, Shanu S
4. **Career Guidance and Higher Education for Success**
   - **Event Date**: 31 August 2024
   - **Resource Persons**: Mr. Jai Sreedhar (Business Head—Manya The Princeton Review), Mr. Boopathy M (Certified Quants Trainer), Mr. Kannan Selvaraj (Certified Verbal Trainer)

4. Courses Developed

4.1 Programming in C (19CS302)

- **Nature**: Lab/Programming
- **Developed for**: Unit 1, Unit 4
- **Instructional Materials Used**: PPT, YouTube Videos, Group Discussions
- **Assessment Activities**: Quizzes, Assignments, Coding Tests, GATE Questions
- **Outcome**: Develop simple applications in C using basic constructs and structures

4.2 Advanced C Programming (19AI305)

- **Nature**: Theory cum Lab
- **Developed for**: Unit 4
- **Instructional Materials Used**: PPT, YouTube Videos, Peer Learning
- **Assessment Activities**: Video Presentations, Coding Tests
- **Outcome**: To write a simple C program

4.3 Fundamentals of C Programming (19AI304)

- **Nature**: Theory cum Lab
- **Developed for**: Unit 1, Unit 5
- **Instructional Materials Used**: PPT, YouTube Videos, Peer Learning
- **Assessment Activities**: Quizzes, Assignments, Video Presentations, Coding Tests
- **Outcome**: To write basic and advanced structure programs in C

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5. Conferences Attended

1. **Fifth International Conference on Sustainable Communication Networks and Applications IEEE**
   - **Organization**: Bharath Niketan Engineering College, India
   - **Date**: 11 December 2024
   - **Paper Title**: A Multi-Source Approach to Film Recommendations Using Social Media, Search Data, and Streaming History
2. **ChatGPT & AI**
   - **Event Date**: 4 July 2024
   - **Organized By**: Skill Nation
   - **Description**: Exploration of ChatGPT's influence on Microsoft Office products, AI tools like Merlin, Google Gemini, and tools for debugging code and enhancing productivity.

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6. Innovations in Teaching and Learning Practices (TLP)

1. **Programming in C**: Developed content for Units 1 and 4, including quizzes, assignments, and coding tests. Designed to help students develop simple applications in C.
2. **Advanced C Programming**: Created resources and assessments for Unit 4, emphasizing practical programming applications.
3. **Fundamentals of C Programming**: Designed teaching materials and activities for Units 1 and 5 to aid in writing basic and advanced C programs.