

# Kings College of Engineering

## Department of Computer Science and Engineering

|                                          |                                                                                     |
|------------------------------------------|-------------------------------------------------------------------------------------|
| Name:K.SARANYA                           |  |
| Designation:                             | Assistant Professor                                                                 |
| Qualification:                           | M.Tech., <u>Ph.D</u>                                                                |
| Area of Specialization:                  | CSE                                                                                 |
| Experience:                              | Teaching: UG: Nil<br>PG: 3 Years                                                    |
|                                          | Industry: Nil                                                                       |
| No.of workshop/Conferences/FDP attended: | 25                                                                                  |
| Publication:                             | Journal<br>National: Nil<br>International : 5                                       |
|                                          | Conference<br>National: 2<br>International: 4                                       |
| Membership:                              | IAENG Member                                                                        |
| Achievements :                           | 100 % Results in Compiler Design                                                    |

## Publications:

### International Journals

1. **K. Saranya and Dr. A. Valarmathi**, "A Comparative Study on Machine Learning based Cross Layer Security in Internet of Things (IoT)," 2022 International Conference on Automation, Computing and Renewable Systems (**ICACRS**), Pudukkottai, India, 2022, pp. 267-273, doi: 10.1109/ICACRS55517.2022.10029035. Published on Feb 2022. (**IEEE with Scopus Indexed**)
2. K. Saranya and A. Valarmathi , "**Cross Layer Based DDoS Attack Detection in Internet of Things Using Machine Learning Algorithms**" by, published in *Tuijin Jishu/Journal of Propulsion Technology*, Vol. 45 No. 2 (2024).
3. **K. Saranya and Dr. A. Valarmathi**, "Enhancing Medical Data Security in Cloud-Based IoT Networks Through Deep Learning Algorithms", 2024, 6th International Conference in Emerging Trends in Management, Education, Engineering, Science and Technology (**ICETMEEST 2024**), Indra Ganesan College of Engineering, Tiruchirappalli. [Proceeding Published on 22 Feb 2024] (**IEEE with Scopus Indexed**).
4. **Saranya, K and Valarmathi, A** 2025, 'Homomorphic with Henon-Map encryption over medical image data confidentiality in cloud and classifying images using deep learning approaches in IoT', *Traitement du Signal*, vol. 42, no. 1, pp. 29-43, **Impact Factor : 1.2**.
5. **Saranya, K and Valarmathi, A** 2025, 'A multilayer deep autoencoder approach for cross layer IoT attack detection using deep learning algorithms', *Scientific Reports*, vol. 15, Article No. 10246, **Impact Factor : 3.8**.

**Patent: Nil**

### International /National Conferences:

#### National Conferences:

1. K. Saranya "Flexible Cache Consistency Maintenance Over Wireless Adhoc Networks" National Conference on NCISE 2011, April 2011, Page 56, NCISE23.
2. K. Saranya and R.Geethanjali, "Air Mobiles", National Conference on ETIC 2011, December 2011, Page 22, ETIC07.

#### International Conferences:

1. K. Saranya and Dr. A. Valarmathi, "A Comparative Study on Machine Learning based Cross Layer Security in Internet of Things (IoT)," 2022 International Conference on Automation, Computing and Renewable Systems (**ICACRS**), Pudukkottai, India, 2022, pp. 267-273, doi: 10.1109/ICACRS55517.2022.10029035. (**IEEE with Scopus Indexed**) Published on Feb 2022.

2. K. Saranya and Dr. A. Valarmathi, "Medical image compression and Classification using deep learning algorithms in IoT healthcare", in **Anna University**, International Conference on "Research Trends in AI and IoT for Infrastructure and Industry". (Proceeding Published on 06.03.2024).
3. K. Saranya and Dr. A. Valarmathi, "Enhancing Medical Data Security in Cloud-Based IoT Networks Through Deep Learning Algorithms", 2024, 6th International Conference in Emerging Trends in Management, Education, Engineering, Science and Technology (**ICETMEEST 2024**), Indra Ganesan College of Engineering, Tiruchirappalli. [Proceeding Published on 22 Feb 2024].
4. K. Saranya, "Liver Disease Prediction Based on Two-Level Ensemble Stacking Model," ICSTES'25, Kings College of Engineering (Autonomous), Pudukkottai, 8–9 May 2025.

### **Book & Book Chapters: Nil**

### **FDP/Seminar attended**

1. Participated in a two-week workshop on *Machine Learning, Deep Learning, and Computational Intelligence* organized by **NIT Trichy** in **2022**, gaining hands-on experience with modern AI techniques and tools.
2. Attended a one-week FDP on *Cryptography, Forensics, and Cyber Security: Recent Trends & Technology* conducted by **NIT Warangal** in **2022**, exploring the latest developments in cyber security and cryptographic systems.
3. Completed a five-day FDP on *Research Opportunities in Emerging Areas of ECE* at **KPR Institute of Engineering and Technology** in **2022**, identifying cutting-edge research trends in electronics and communication engineering.
4. Took part in a one-day seminar on *Microplastic Pollution: Role of Educators and Researchers* organized by **CRESIHRD and ICERS** in **2022**, understanding the environmental impact and the role of academia in mitigation.
5. Attended a two-day workshop on the *Art of Academic Writing* at **Maharani Kasiswari College** in **2022**, enhancing skills in scholarly writing and publication.
6. Participated in a one-day workshop titled *Induction Program I – Thesis Writing and Patent-filing* at **CFR, Anna University, Chennai** in **2022**, learning the fundamentals of academic writing and intellectual property.
7. Attended a three-day *Induction Program II – Thesis Writing and Patent-filing* organized by **CFR, Anna University, Chennai** in **2022**, with detailed insights into research documentation and patent procedures.
8. Participated in a one-week FDP on *Application of Machine Learning in the Modern Cloud Era* organized by **Periyar** in **2022**, gaining knowledge on deploying ML solutions in cloud-based environments.
9. Attended a five-day FDP on *Cyber Security in the Post Quantum World* conducted by **VIT Chennai** in **2022**, learning about next-generation security challenges and quantum-resistant cryptography.

10. Completed a five-day FDP on *Recent Research Convergence in Artificial Intelligence and IoT* organized by **Bon Secours College for Women** in **2022**, focusing on interdisciplinary research and integration of AI with IoT.
11. Participated in a two-day workshop on *Tamils and Technology* organized by **Anna University, Trichy** in **2023**, examining the intersection of regional heritage and technological development.
12. Attended a one-week FDP on *Big Data and Analytics* at **NIT Jalandhar** in **2023**, gaining exposure to tools like Hadoop and Spark and techniques for processing large-scale data.
13. Took part in a one-day session on *Writing SCOPUS Indexed Authored / Edited Book Proposals for International Publishers* organized by **Adonic Informatics** in **2023**, learning proposal writing strategies for international academic publishing.
14. Attended a one-day FDP on *Outcome-Based Education (OBE)* organized by the **IQAC, Kings College of Engineering**, on **27th August 2024**, gaining insights into curriculum planning, assessment strategies, and continuous improvement processes aligned with OBE principles.
15. Participated in a one-week FDP on *Transformative Technologies in Healthcare: Leveraging Data Science, IoT, and AI* organized by **St. Joseph's College of Engineering and Technology, Thanjavur**, from **23rd to 28th September 2024**, focusing on the integration of intelligent technologies in modern healthcare.
16. Attended a one-week FDP on *Data Science and Machine Learning Applications for Engineering and Sciences* conducted by **Shri Vishnu Engineering College for Women (Autonomous), Bhimavaram**, from **21st to 27th October 2024**, emphasizing interdisciplinary applications of data science and machine learning.
17. Participated in a three-day workshop on *Latest Trends in Cloud Computing* organized by **Kings College of Engineering** from **13th to 15th November 2024**, exploring advancements in cloud platforms, deployment models, and industry use cases.
18. Successfully participated in an **online workshop** on "*Introduction to Blockchain: The Future of the Internet*" organized by **ECLearnix EdTech Private Limited, Coimbatore, Tamil Nadu, India**, on **22nd March 2025**, gaining foundational knowledge of blockchain technology and its potential impact on the future of the internet.
19. Successfully participated in an **online workshop** on "*Smart Resume Writing: Beating ATS with AI Strategies for Students*" organized by **ECLearnix EdTech Private Limited, Coimbatore, Tamil Nadu, India**, on **22nd March 2025**, gaining foundational knowledge of blockchain technology and its potential impact on the future of the internet.

### **Programs organized**

1. **Organized a guest lecture on Gender Equality** through the **Gender Sensitization Cell** and **Sustainable Development Goals (SDG)**, on **28th October 2024** at **Kings College of Engineering**, promoting awareness and dialogue on gender equity in academic and societal contexts.