

## Faculty Profile

**Dr. A.Jenefa, M.Tech., Ph.D.**

Assistant Professor,

Division of Data Science and Cyber Security

email id: jenefaa@karunya.edu



### Academic Background

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Degree	University	Year
Ph.D.	Anna university, Chennai	2022
M.Tech	Karunya University	2013
B.E	Anna university, Tirunelveli	2011

### Courses Taught

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- Computer Networks
- Programming in Python
- C++ programming
- Cryptography and Network Security
- Digital Principles and System Design
- Operating System
- Programming in C
- Object Oriented Programming
- Web Technology
- Data Structures and Algorithms
- Database Management System
- Computer Graphics and Multimedia
- Professional Ethics and Human Rights

### Research Interests

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- Computer Networks
  - Artificial Intelligence
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## Most recent Publications

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### INTERNATIONAL JOURNALS:

1. **Jenefa, A.**, and M. BalaSingh Moses. "A multi-phased statistical learning based classification for network traffic." *Journal of Intelligent & Fuzzy Systems* 40, no. 3 (2021): 5139-5157.
2. Serin, J., Keren T. Vidhya, IS Mary Ivy Deepa, V. Ebenezer, and **A. Jenefa**. "Gender Classification from Fingerprint Using Hybrid CNN-SVM." *Journal of Artificial Intelligence and Technology* 4, no. 1 (2024): 82-87.
3. Sangeetha, R., Bessy M. Kuriakose, V. Edward Naveen, **A. Jenefa**, and A. Lincy. "Sketching of interactive VoIP traffic with multivariate statistical learning-based classification." *Journal of Intelligent & Fuzzy Systems* (2023) 1-15.
4. **Jenefa, A.**, Kuriakose, Bessy M. "EDSR: Empowering super-resolution algorithms with high-quality DIV2K images." *Intelligent Decision Technologies* (2023) 1-15.
5. **Jenefa, A.**, Ebenezer Veemaraj, and A. Lincy. "ABM-OCD: Advancing ovarian cancer diagnosis with attention-based models and 3D CNNs." *ITEGAM-JETIA* 9, no. 43 (2023): 23-33.
6. **Jenefa, A.**, and Naveen V. Edward. "The ascent of network traffic classification in the dark net: A survey." *Journal of Intelligent & Fuzzy Systems* (2023): 1-22.
7. Integrating Vision Transformers for Advanced Skin Lesion Diagnostics. *The Open Dermatology Journal*, 18(Article e18743722291371). Bentham Science Publishers. <https://doi.org/10.2174/0118743722291371240308064957>
8. **Jenefa, A.**, and Blessy Selvam. "Tracing of VOIP traffic in the Rapid Flow Internet Backbone", on *International Journal of Research in Engineering and Technology*, eISSN: 2319-116, Volume 4, Issue 3, and March 2015.
9. Published a paper entitled "A Survey on Classification of traffic using Clustering Algorithms", on *International Journal of Advanced Research in Computer Science*, Volume 4, No.2, Jan-Feb 2013 (ISSN No: 0976-5697).
10. Published a paper entitled "Application Identification using Supervised Clustering Method", *International Journal of Engineering Research and Applications*, Volume 3, Issue 2, March-April 2013 (ISSN No: 2248-9622).
11. Published a paper entitled "A Compound Statistical Network Traffic Classification for VoIP traffic", in the *International Journal for Research in Applied science and Engineering Technology (IJRASET)*, ISSN: 2321-9653; IC Value: 45.98; Volume 5 Issue IX, September 2017.

### INTERNATIONAL CONFERENCES:

1. **Jenefa, A.**, and M. BalaSingh Moses. "Multi-level statistical classification of network traffic." In 2017 International Conference on Inventive Computing and Informatics (ICICI), pp. 564-569. **IEEE**, 2017.
2. **Jenefa, A.**, and M. BalaSingh Moses. "An Upgraded C5.0 Algorithm for Network Application Identification." In 2018 2nd International Conference on Trends in Electronics and Informatics (ICOEI), pp. 789-794. **IEEE**, 2018.
3. **Jenefa, A.**, Aanya Khan, Esther Alice Mathew, Junia Sam Dani, Giftlin Olivia, and T. S. Shivani. "Enhancing Human Behaviour Analysis through Multi-Embedded Learning for Emotion Recognition in Images." In 2023 7th International Conference on Intelligent Computing and Control Systems (ICICCS), pp. 331-336. **IEEE**, 2023.
4. **Jenefa, A.**, Shebin Sam, Varun Nair, Boney George Thomas, Anson Saju George, Rino Thomas, and Alwin Dany Sunil. "A Robust Deep Learning-based Approach for Network

- Traffic Classification using CNNs and RNNs." In 2023 4th International Conference on Signal Processing and Communication (ICSPPC), pp. 106-110. **IEEE**, 2023.
5. **Jenefa, A.**, Aaron Ande, Thejas Mounikuttan, M. D. Anuj, G. Jenulin Makros, G. Rachel Rejoice, and T. Mary Shalini. "Real-Time Rail Safety: A Deep Convolutional Neural Network Approach for Obstacle Detection on Tracks." In 2023 4th International Conference on Signal Processing and Communication (ICSPPC), pp. 101-105. **IEEE**, 2023.
  6. Regi, Ansu Elsa, **A. Jenefa**, SV Evangelin Sonia, Edward Naveen, A. Lincy, and K. Vidya. "Multidisciplinary Approach to Physical Rehabilitation on Left and Right Ventricular Function in Heart Failure Patients." In 2023 International Conference on Circuit Power and Computing Technologies (ICCPCT), pp. 823-829. **IEEE**, 2023.
  7. Regi, Ansu Elsa, **A. Jenefa**, and Edward Naveen. "Liquid Biopsy for Non-Invasive Monitoring of Tumour Evolution and Response to Therapy." In 2023 International Conference on Circuit Power and Computing Technologies (ICCPCT), pp. 815-822. **IEEE**, 2023.
  8. **Jenefa, A.**, Joshua Samuel, Giri Balan, and Joshua Premkumar. "Enhancing public safety through license plate recognition for counter terrorism through deep learning technique." In 2023 4th International Conference on Signal Processing and Communication (ICSPPC), pp. 96-100. **IEEE**, 2023.
  9. **Jenefa, A.**, F. T. Josh, Antony Taurshia, K. Rathina Kumar, S. Kowsega, and Edward Naveen. "PQC Secure: Strategies for Defending Against Quantum Threats." In 2023 2nd International Conference on Automation, Computing and Renewable Systems (ICACRS), pp. 1799-1804. **IEEE**, 2023.
  10. **Jenefa, A.**, S. Esswari, and Bessy M. Kuriakose. "Utilizing RL and Web-Enhanced Commuting for Traffic Congestion Mitigation and Public Transportation Enhancement." In 2023 7th International Conference on Electronics, Communication and Aerospace Technology (ICECA), pp. 1760-1766. **IEEE**, 2023.
  11. **Jenefa, A.**, S. Rithick, A. Vishal, T. Jesman, Richin Christ Robert, and Bessy M. Kuriakose. "Smart Sleep Monitoring: IoMT and GRU for Effective Sleep Disorders Management." In 2023 7th International Conference on Electronics, Communication and Aerospace Technology (ICECA), pp. 1767-1773. **IEEE**, 2023.
  12. **Jenefa, A.**, V. Ebenezer, A. Joshua Isaac, Joe Marshall, P. Pradeepa, and V. Naveen. "Adversarial Attacks on Generative AI Anomaly Detection in the Quantum Era." In 2023 7th International Conference on Electronics, Communication and Aerospace Technology (ICECA), pp. 1833-1840. **IEEE**, 2023.
  13. Lincy, A., V. Ebenezer, Arul Xavier VM, A. Joshua Isaac, **A. Jenefa**, and Edward Naveen. "Analyzing DNA Pattern Matching through String Similarity Measurements in Cancer Sequence Data." In 2023 International Conference on Sustainable Communication Networks and Application (ICSCNA), pp. 1373-1381. **IEEE**, 2023.
  14. **Jenefa, A.**, V. Ebenezer, E. Bijolin Edwin, J. Jerlin Rajan, P. Kingston Stanley, and M. Roshni Thanka. "Automating MRI-Based Ovarian Cancer Diagnosis with a DCNN." In 2023 International Conference on Sustainable Communication Networks and Application (ICSCNA), pp. 1353-1360. **IEEE**, 2023.
  15. **Jenefa, A.**, V. Ebenezer, G. Gifta Jerith, S. Jim Reeves, and I. Solomon. "IoMT-Enabled Wearable Sensors for Continuous Glucose Monitoring in Diabetes Management." In 2023 International Conference on Self Sustainable Artificial Intelligence Systems (ICSSAS), pp. 1248-1253. **IEEE**, 2023.
  16. **Jenefa, A.**, V. Ebenezer, K. Rajkumar, M. Vargheese, and K. Arul Jeyaraj. "COPD Assessment Through Multimodal Analysis: Exploiting the Synergy of CNNs and LSTM Networks." In 2023 International Conference on Self Sustainable Artificial Intelligence Systems (ICSSAS), pp. 13-18. **IEEE**, 2023.

17. Published a paper entitled “A Survey on Data Mining Methodologies”, in the 5th International Conference on Advanced Computing, Control Systems, Machines and Embedded Technology, March 2015 (ISBN: 978-93-80757-74-2).
18. Published a paper entitled “Optimized Workload Aware Scheduler for Heterogeneous Cloud Environment”, in the ‘5th International Conference on Advanced Computing, Control Systems, Machines and Embedded Technology’, March 2015 (ISBN: 978-93-80757-74-2).

## BOOK PUBLICATIONS

1. **Jenefa, A.**, A. Lincy, and V. Edward Naveen. "A framework for breast cancer diagnostics based on MobileNetV2 and LSTM-based deep learning." In Computational Intelligence and Modelling Techniques for Disease Detection in Mammogram Images, pp. 91-110. Academic Press, Elsevier, 2024.
2. **Jenefa, A.**, A. Lincy, and J. Anitha. "Rehabilitation for individuals with autism spectrum disorder using mixed reality virtual assistants." In Computational Intelligence and Deep Learning Methods for Neuro-rehabilitation Applications, pp. 83-100. Academic Press, Elsevier 2024.
3. K.Vidhya, **A.Jenefa**, R.Venkatesan, Priscilla Joy,”Internet of Things”, Charulatha Publications, Sep-2023
4. A.Jenefa, Artificial Intelligence for Beginners,” Charulatha Publications, March-2024

## Achievements and Awards

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1. Awarded a Trophy for being the fifth Rank Holder (B.E., CSE) from Anna University of Technology, Tirunelveli.
2. Got Excellence academic and the second best outgoing Student award in the year 2011.
3. Awarded certificate of Appreciation for producing 100% result in the subject “Professional Ethics in Engineering for the academic year 2018-2019.
4. Awarded certificate of Appreciation for producing 100% result in the subject “Digital Principles and system design” for the academic year Nov 2020.
5. Awarded certificate of Appreciation for producing 100% result in the subject “Database Management System” for the academic year April 2021.
6. Participated as Mentor in Smart India Hackathon 2020 and won 1, 00,000 Rupees cash award for the team Tech Kings.
7. Participated as Mentor in Smart India Hackathon 2022 and won 1, 00,000 Rupees cash award for the team InfoTech Sys.

## Resource Person and Invited Talks

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1. Delivered an expert lecture session with hands on session (Title: Bioinformatics with Perl an exploratory session) on 20.05.2022 in online FDP on Bioinformatics: Algorithms, Applications and Tools (Interdisciplinary) BAAT 22” (16 th May – 25th May 2022) Organized by E & ICT Academy, National Institute of Technology, Warangal in association with University College of Engineering BIT Campus, Anna University, Tiruchirappalli – 620 024.
2. Delivered an expert lecture session with hands on session (Title: Network Analysis Tool) on 22.07.2022 in online FDP on Computational Biology (13th July – 22th July 2022) Organized

- by E & ICT Academy, National Institute of Technology, Warangal in association with University College of Engineering BIT Campus, Anna University, Tiruchirappalli – 620 024.
3. Delivered an expert lecture session with hands on session (Title: Network Analysis Tool: Cytoscape) on 04.09.2022 in online FDP on Recent Trends in Bio-Informatics (26th August – 04th September 2022) Organized by E & ICT Academy, National Institute of Technology, Warangal in association with University College of Engineering BIT Campus, Anna University, Tiruchirappalli – 620 024.
  4. Being the resource person in the Police Officers Training Program'17 organized by Department of CSE/IT, Anna University, UCE (BIT Campus).
  5. Being the resource person in the Police Officers Training Program'18 organized by Department of CSE/IT, Anna University, UCE (BIT Campus).
  6. Being the Session Chair person in the Two Days National Level Symposium FENIX'17 organized by Department of CSE/IT , Anna University, UCE(BIT Campus).
  7. Being the Session Chair person in the Two Days National Level Symposium FENIX'18 organized by Department of CSE/IT , Anna University, UCE(BIT Campus).
  8. Being the Judge of Fine Arts& ADZAP event in FIESTA'17,"festivity of Talents" at Anna University, UCE (BIT Campus).
  9. Being the Judge of Fine Arts& ADZAP event in FIESTA'18,"festivity of Talents" at Anna University, UCE (BIT Campus).
  10. Being the Session Chair person in the Two Days National Level Symposium PRAYUDDHA'18 organized by Department of CSE/IT , Anna University, UCE(BIT Campus).
  11. Served as a MC Desk Member for the Conference on Intelligent Computing and Communication Networks (CICCN 2021) at Anna University, UCE (BIT Campus).
  12. Served as a Technical Committee Member for the Conference on Intelligent Computing and Communication Networks (CICCN 2021) at Anna University, UCE (BIT Campus).

#### Conferences/Workshops/Seminar Organised:

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1. Has been co-coordinators for Fourteen Days TEQIP-II sponsored Faculty Development Programme on "Network Technologies and security" during 04 th – 19 th May 2015 at BIT Campus, Anna University, Trichy.
2. Has been co-coordinator for Machine Learning Using Python sponsored by Department of CSE/IT, UCE (BIT Campus). during 12th -13th March 2020
3. Has been co-coordinator for "The Behaviour of Quantum System and What Makes Quantum Computing Special" sponsored by Department of CSE/IT, UCE (BIT Campus) during April 11th, 2022.