



# Sri SAI RAM INSTITUTE OF TECHNOLOGY

An Autonomous Institution | Affiliated to Anna University & Approved by AICTE, New Delhi

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Sai Leo Nagar, West Tambaram, Chennai - 600 044. [www.sairamit.edu.in](http://www.sairamit.edu.in)



## DEPARTMENT OF INFORMATION TECHNOLOGY

<b>Name :</b> R.PRABAVATHI	
<b>Designation</b>	<b>ASSISSTANT PROFESSOR</b>
<b>Qualification</b>	<b>M.E (Multimedia Technology) PhD (Pursuing)</b>
<b>Area of Specialization</b>	<b>Machine Learning</b>
<b>Experience</b>	<b>UG : 14.5 years</b> <b>PG: -</b>  <b>Industrial Experience : Nil</b>
<b>No. of workshop / Conferences / FDP attended</b>	<b>Workshops &amp; FDP : 20</b> <b>International Conference :30</b> <b>National Conference : 10</b>
<b>No. of workshop / Conferences / FDP organized</b>	<b>Workshops and FDP: 10</b> <b>International Conferences:-</b> <b>National Conferences : -</b>
<b>No.of Funded Projects</b>	<b>2</b>
<b>No.of Research Guidance</b>	<b>NIL</b>
<b>Membership in Professional Bodies</b>	<b>IEEE, ISTE, IAENG</b>

**PROFESSIONAL EXPERIENCE:**

S.No	Organization	Post Held	Number of Years	From	To
1.	Sri Sairam Engineering College	Associate Professor	6 Months	1.07.25	till date
2.	Sri Sairam Institute of Technology	Assistant Professor	4 yrs 6 months	20.01.2021	30.06.25
3.	SRM University	Assistant Professor (Sr.G)	1 yr 7 months	10.06.2019	13.01.2021
4.	Jerusalem College of Engineering	Assistant Professor	7 yrs 10 months	8.8.2011	7.06.2019

**FACULTY ACHIEVEMENTS:**

Publications	Journals	13
	Books / Book Chapters / Monographs	1 Book published
	Conferences	30
Events organized		10
Events attended		15
Awards Received		-
Details on Funded Projects		Received seed fund from AICTE of Rs.1,00,000 under the scheme AICTE Spices for SDG Club. Received a grant of (\$8,499 = 7,48,393) from IEEE HTB for the project "Aquasol" under the flagship Tech4Good.
Details on Thesis		Investigation on Soil Physio Chemical Properties of Paddy Crops Using Optimized Hybrid Machine Learning Models
Details on Research Guidance		-

**PUBLICATIONS:**

**CONFERENCE**

1. Raman, **Prabavathi**, et al. "Realtime accident prevention using drivers fatigue and drowsiness." AIP Conference Proceedings. Vol. 2857. No. 1. AIP Publishing, 2023.
2. Shiny Duela J, Uma Maheshwari A, **Prabavathi R**, P. Umapathy and R. K, "Quantum assisted Genetic Algorithm for Sequencing Compatible Amino Acids in Drug Design," 2023 Third International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT), Bhilai, India, 2023, pp. 1-7, doi: 10.1109/ICAECT57570.2023.10117673.
3. **R. Prabavathi**, P. Subha, V. Brindha Devi., C. Rekha., A. Verma and S. Rohith., "Krishi Nanban: AI Driven Precision Agriculture," 2022 International Conference on Data Science, Agents & Artificial Intelligence (ICDSAAI), Chennai, India, 2022, pp. 1-5, doi: 10.1109/ICDSAAI55433.2022.10028970.
4. **R. Prabavathi**, J. S. Duela, B. J. Chelliah, S. M. Saranya and A. Sheela, "An Intelligent Stabilized Smart Sewage Treatment Plant (STP)," 2021 4th International Conference on Computing and Communications Technologies (ICCCT), 2021, pp. 381-385, doi: 10.1109/ICCCT53315.2021.9711758.
5. K. Priyadharshini, **R. Prabavathi**, V. B. Devi, P. Subha, S. M. Saranya and K. Kiruthika, "An Enhanced Approach for Crop Yield Prediction System Using Linear Support Vector Machine Model," 2022 International Conference on Communication, Computing and Internet of Things (IC3IoT), 2022, pp. 1-5, doi: 10.1109/IC3IOT53935.2022.9767994.
6. Priyadharshini, V. B. Devi, **R. Prabavathi**, P. Subha and M. Meenaloshini, "An Efficient and Robust Random Forest Algorithm for Crop Disease Detection," 2022 International Conference on Communication, Computing and Internet of Things (IC3IoT), 2022, pp. 1-4, doi: 10.1109/IC3IOT53935.2022.9767937.
7. **R. Prabavathi** and B. J. Chelliah, "An Optimized Gaussian Extreme Learning Machine (GELM) for Predicting the Crop Yield using Soil Factors," 2022 International Conference on Electronic Systems and Intelligent Computing (ICESIC), 2022, pp. 219-222, doi: 10.1109/ICESIC53714.2022.9783578.
8. S Mohana Saranya, R R Rajalaxmi, **R Prabavathi**, T Suganya, S Mohanapriya, K Tamilselvi, C Ebenezarkanmani, "Optimized Deep Convolutional Generative Adversarial Network for Tomato Leaf Disease Identification," 2021 5th International Conference on Electronics, Communication and Aerospace Technology (ICECA), 2021, pp. 1301-1307, doi: 10.1109/ICECA52323.2021.9675945.
9. S Mohana Saranya, R R Rajalaxmi, **R Prabavathi**, T Suganya, S Mohanapriya and T Tamilselvi 2020, "Deep Learning Techniques in Tomato Plant – A Review",

International E- Conference on Data Analytics, Intelligent Systems and Information Security & ICDIIS 2020, Vol.1767, doi:10.1088/1742-6596/1767/1/012010.

10. **R. Prabavathi**, J. S. Duela, B. J. Chelliah, S. M. Saranya and A. Sheela, "An Intelligent Stabilized Smart Sewage Treatment Plant (STP)," 2021 4th International Conference on Computing and Communications Technologies (ICCCT), 2021, pp. 381-385, doi: 10.1109/ICCCT53315.2021.9711758.
11. M. S. S **Prabavathi**, et al., "Optimized Deep Convolutional Generative Adversarial Network for Tomato Leaf Disease Identification," 2021 5th International Conference on Electronics, Communication and Aerospace Technology (ICECA), 2021, pp. 1301-1307, doi: 10.1109/ICECA52323.2021.9675945.
12. Chelliah B.J., Arunkumar S., **Prabavathi R.**, Aarthi B. (2021) A Robust Statistical CNNCTC-Based AI Model for Tracking and Monitoring COVID-19. In: Kannan R.J., Geetha S., Sashikumar S., Diver C. (eds) International Virtual Conference on Industry 4.0. Lecture Notes in Electrical Engineering, vol 355. Springer, Singapore. [https://doi.org/10.1007/978-981-16-1244-2\\_25](https://doi.org/10.1007/978-981-16-1244-2_25)

#### **JOURNAL PUBLICATION**

##### **SCOPUS:**

1. Duela, S., Sara, D. & **Prabavathi**, (2022). Bin Bay: An Optimized Smart Waste Disposal System for a Sustainable Urban Life using LSTM and Fog Computing. Journal of Computer Science, 18(11), 1110-1120. <https://doi.org/10.3844/jcssp.2022.1110.1120>
2. **R. Prabavathi** and B. J. Chelliah, "A Comprehensive Review on Machine Learning Approaches for Yield Prediction Using Essential Soil Nutrients' ', Universal journal of Agriculture research, 2022, 10(3), pp. 288–303.
3. Duela, J. Shiny, and **R. Prabavathi**. "A Novel Approach to Detect the Bearing Fault in Rail Networks Using Big Data Classification and Delivery through Edge Processing." Design Engineering (2021): 12577-12596.
4. **Ms. Prabavathi**, J. Shiny Duela, S. SenthilPandi, M. Saranya 2021, " A Dynamic and Unique Approach for Energy Consumption Prediction in High Raised, Turkish Online Journal of Qualitative Inquiry, Vol.12, No.5, pp. 1247 – 1256.

5. **Ms. Prabavathi**, J.Shiny Duela, V.Brindha Devi, S.SenthilPandi 2021, " Prehistoric Stone Image Tamil Character Recognition using Optimized Deep Neural Network using Zernike Moments and Simplex Method, Turkish Journal of Computer and Mathematics Education (TURCOMAT)Vol.12, No.11, pp. 5983 – 5591.
6. **Ms. Prabavathi**, Mr. Yuvraj Talukdar, Mr. Yash Kimtani, Mr. Ajit Kumar Shah 2020, "A Novel approach for Training Neural Network using Linear Programming", International Journal of Advanced Science and Technology, Vol.29, No.3, pp. 8224 – 8236.
7. **Ms. Prabavathi**, Ms.Nandhini Kannan, Mr. Subash Kumar, Mr. Kumar Raunak 2020, " Analysis and prediction of Industrial Accidents using machine learning ", International Journal of Advanced Science and Technology, Vol.29, No.4, pp. 4990 – 5000.

**SCI:**

1. **Prabavathi** Raman , Chelliah BJ. 2023. Enhanced reptile search optimization with convolutional autoencoder for soil nutrient classification model. PeerJ 11:e15147 <https://doi.org/10.7717/peerj.15147>
2. **Prabavathi** Raman, and Balika Joseph Chelliah. "Hybrid Whale Archimedes Optimization-based MLPNN model for soil nutrient classification and pH prediction." Environmental Science and Pollution Research 30.50 (2023): 109389-109409.
3. A. SenthilSelvi, J. Shiny Duela, **R. Prabavathi**, Dioline Sara, (March 2021), "Performance evaluation of adaptive neuro fuzzy system (ANFIS) over fuzzy inference system (FIS) with optimization algorithm in de-noising of images from salt and pepper noise", Journal of Ambient Intelligence and Humanized Computing.
4. E Dhiravidachelvi, S Senthil Pandi, **R Prabavathi**, C Bala Subramanian (Oct 2022) Artificial Hummingbird Optimization-Based Hybrid CNN-RNN for Accurate Exudate Classification from Fundus Images. J Digit Imaging . <https://doi.org/10.1007/s10278-022-00707-7>

**NON-INDEXED - UGC**

1. L.NaveenKumar, P.Nijanthan, K.Priyadarshini, K.Mythreyi, **R.Prabavathi** 2018," Prognosis and Diagnosis of Malignant Pleural Mesothelima Cancer", International Journal of Scientific Research and Review, Vol.7, No.4, pp. 476-481.

**RESOURCE PERSON:**

1. Guest Lecture for the subject “Computer Graphics” on 28/01/2020 at Tagore Engineering College, Rathinamangalam for IV<sup>th</sup> year students.
2. Guest Lecture on IOS App Development on 24.06.2022 at Saveetha Engineering College.
3. Workshop on “ ML UnPlugged” on 9.09.2025 at Sathyabama University.

**BOOK PUBLISHED:**

1. Published a book titled “Computer Graphics” by Charulatha publication. Year of publication: 2019

**PATENT:**

1. ID: 2020103027, Filing date: 27-10-2020, Title: STAGGERED SHORT TRANSMISSION(SST) PROTOCOL FOR ROUTING DURING ENERGY SAVING USING WSN, Granted date: 24-12-2020
2. ID: 202241006784 A, Filing date: 8-02-2022, Title: IoT Based Smart Material for EV Segment Using Wire Electrical Discharge Machining Thereof , Published date: 11/02/2022.
3. ID: 202441087472 A WEB BASED SOLAR ENERGY MONITORING AND CUSTOM PRICING Filing date: 13/11/2024 Published Date: 22/11/2024

**FDP/SEMINAR/CONFERENCE/WORKSHOPS (organized and attended)**

**ORGANIZED:**

1. Organized a guest lecture on “Recent trends in Artificial Intelligence” for III Year CSE students on 1.2.17 by JCE
2. Organized a guest lecture on “Virtual Reality and Augmented reality” for III Year CSE students on 14.8.18 by Sameer T Mohamed, Creative Artist, Arena Animation, Chennai.
3. Co-Coordinator for organizing a five day Workshop on “CORE JAVA” by G.V Shanmugam, Shan Software Software Services.
4. Organized activity class on “CONCEPT HUNT “from Graphic animations and videos for III yr Students.

5. Organized Tech Camp on “ Web Development and Multimedia” from 11.05.2020 to 13.05.2020 for +2 students and have been one day session handler for topic “Adobe Photoshop”
6. Organized a Webinar on “Privacy Applications of Blockchain” for Faculties and Researchers on 2.06.20 by Mr.Wilson Bright, Chennai.
7. Organized a one day webinar on “ Retuning Challenges in Industrial IOT” on 05.07.2020 by Mr. Jaya shakthi Kannan, Founder CDIX Innovations pvt,ltd.
8. Organized an International FDP on “ Recent Trends in Computing” from 24.7.2020 to 28.7.2020 by Dr.Hiroki Sayama (Binghamton University, New York), Mr.Karthik Raja( Pega lead , USA), Mr.Muthu Narayana Chellappa (Lead Full Stack, USA), Mr.Narayanan( Thulir Software, Chennai), Mr.Parasuram(Securekey Technologies, Canada).
9. Webinar on Topic: “Research Paper – Structure, Metrics and Publication ethics” by IT department on 30.4.21

**Date:** 30.04.2021

**Time:** 11.00am - 12.30pm

**Chief Guest:** Dr. A.Chamundeswari

Professor, CSE

SSN College of Engineering

10. Two-day Workshop on “Art of research” from 23.08.21 to 24.08.21 conducted by IT

department

**Date:** 23.8.2021 to 24.08.2021

**Time:** 10.00am - 1.00pm

**Speaker:** Dr.Anand Nayyar

Professor, Researcher and Scientist

Duy Tan University, Vietnam

11. Inauguration of Computational Intelligence Society and Pep Talk on “Awareness and Opportunities in CIS for young aspirants”

**Date:** 13.10.2021

**Time:** 11.00am - 12.30pm

**Chief guest:** Dr. N.Kumarappan, Chairman,  
IEEE Madras Section & CIS Madras Chapter,  
Professor, Department of Electrical Engineering,  
Annamalai University, Tamil Nadu.

12. IEEE CIS Madras Chapter sponsored Student Training Program on  
“Computation Intelligence in Engineering”

**Date:** 28.10.2021- 29.10.2021

**Time:** 9.00am - 4.00pm

**Fund:** Rs.20,000

**Chief guest:** 1. Dr. N.Kumarappan, Chairman,  
IEEE Madras Section & CIS Madras Chapter,  
Professor, Department of Electrical Engineering,  
Annamalai University, Tamil Nadu  
2. Dr.Swagata Sarkar (CIS-Advisor)  
Associate Professor &Head-AIDS, Sri Sairam Engineering  
College.  
3. Dr.C.Komathi  
Associate Professor, Dept of EIE, Sri Sairam Engineering  
College.

13. Webinar on “Machine Learning with WEKA” in association with CIS Society

**Date:** 02.02.2022

**Time:** 11.00am - 12.30pm

**Chief guest:** Dr.S.Sathiya Narayanan  
Assistant Professor (Sr.G)  
School of Electronics Engineering  
VIT,Chennai.

**ATTENDED:**

1. Mrs.R.Prabavathy, attended Two Days Orientation Programme on Teaching Methodology at Jerusalem College of Engineering during 30.06.2014 & 01.07.2014.
2. Attended 2 day workshop from 8-12-17 to 9-12-17 on "Artificial Intelligence and Machine Learning" Conducted by Department of Electronics and Communication Engineering, MNM Jain Engineering College.

3. Attended 1 day Seminar on "Data Science and Big Data Analytics" held on 31-10-2017 at the Department of Computer Science and Engineering, Jerusalem College of Engineering.
4. Attended Faculty Development Programme from 12-12-17 to 14-12-17 on "ICT in Teaching & Learning Methodologies" Conducted by Jerusalem Research Forum, Department of Computer Science and Engineering, Jerusalem College of Engineering.
5. Attended 3 days (19 - 21 April 2018) workshop on "Computational Intelligence and Connectivity for Smart City" organized by Department of Computer Science and Engineering, College of Engineering, Guindy.
6. Attended 5 days MHRD sponsored workshop on Cloud and edge computing for bigdata analytics at NIT Trichy in association with Macquarie University - Australia 16.12.19 to 20.12.2019
7. Attended one day workshop on INDUSTRY 4.0 organized at SRMIST, Ramapuram on 8.2.2020
8. Attended 7 days FDP on "NAAC Awareness Program" from 08-05-2020 to 14-05-2020 organized by Marathwada Mitra Mandal Institute of Technology (MMIT).
9. Attended one-week STTP on "Advanced Research Methodology" from 11-05-2020 to 15-05-2020 organized by REST Society for Research International (RSRI), Krishnagiri, Tamil Nadu, India.
10. Attended 5 days FDP on "Python Programming " from 18-05-2020 to 22-05-2020 organized by Sona College of Technology with Spoken Tutorial,IIT-Bombay.
11. Attended two-day International Workshop on "The Craft of Research" organized at SRMIST, Ramapuram from 02.7.2020 to 03.7.2020
12. Attended 5 days FDP on "Data Science-Hands on with python" from 14-09-2020 to 18-09- 2020 organized by VIT, Chennai.