



Prof. Dr. A. Saravanan

M.E., Ph.D (Full-time) NIT (Tamil Nadu)
Computer Science & Engineering

Experience

- Academic – 28 Years
- Research – 16 Years
- Industry – 4 Years

Subjects Taught

- Blockchain Technology
- Artificial Intelligence
- Internet of Things
- Advanced Databases
- Operating Systems
- Data structures and algorithms
- Database Technology
- Programming Languages
- Database Management Systems
- Data Communication
- Computer Networks
- Mobile Computing

Project Guidance

- More than 85 UG Projects (UG Engg.)
- More than 16 PG Projects (PG Engg.)

Research Guidance

- M.Phil – 1
- Ph.D : Completed - 1; Thesis Preparation – 1;

Awards

- Best Teacher Award
- Best Research Paper Award

Research Interests

Mobile Data and Big data Management, Image Processing, Health Services, Artificial Intelligence (Machine Learning)

Ph.D Thesis

Title of the Thesis: “Methodologies for Improving Location Based Services Using Diversified Contexts in Mobile Environment”.

Description: Most of the context-aware research works depend on the primary parameters such as time, location, travel path and direction. The proposed work has considered the next level context parameters such as forward direction, road pattern, same or different speed of vehicle, query processing time, query w.r.t unknown destination and change of direction for improving the results of resource suggestion process. The research in overall has suggested the methodologies and models for improving the accuracy and usefulness of mobile query results in Location Based Services.

Research Publications

International Journals

- **A. Saravanan et al. (2024)** Real Time Monitoring and Detection of Drowsy Driving, Journal of Environmental Protection and Ecology, ISSN:1311-5065, 25(7), 2417 – 2426.
- M. Divya, J. Dhilipan, **A. Saravanan (2024)** Classification of multiple sclerosis lesion through Deep Learning analysis of MRI images, Scientific and Technical Journal of Information Technologies, Mechanics and Optics, ISSN:2226-1494, 24(5), 824 -833.
- **A. Saravanan et al. (2023)** Effect of corn cob carbon quantum dots and areca husk microfiber on EMI shielding effectiveness of flexible PVA thin film at 8–20GHz frequency bands. Biomass Conversion and Biorefinery, ISSN:2190-6815, Springer Publications. IF:3.7
- R. Arthi and **A. Saravanan et al. (2023)** A Framework for Improving the Performance of QKDN using Machine Learning Approach, Advances in Distributed Computing and Artificial Intelligence Journal, ISSN: 2255-2863, 12(1), 01-11.
- **A. Saravanan et al. (2023)** A state-of-the-art approach for dental diagnosis using machine learning assessment: A short communication, SRM Journal of Research in Dental Sciences, ISSN: 2772-5243, 14(2), 102-104.
- M. Harshini, J. Dhilipan, **A. Saravanan (2023)** An Intelligent Non-Invasive Sweat-based Glucose Monitoring System for Managing Diabetes Mellitus, International Journal of Intelligent Systems and Applications in Engineering (IJISAE), ISSN:2147-6799, 12(1S), 723–736.

- M. Harshini, J. Dhilipan, **A. Saravanan** (2023) A Comparative Study on Continuous Glucose Monitoring Devices for Managing Diabetes Mellitus, International Information and Engineering Technology Association (IIETA), ISSN: 0992-499X, 37(5), 1351-1360.
- M. Divya, J. Dhilipan, **A. Saravanan** (2022) Detecting the Types of Multiple Sclerosis using Multilayer Perceptron with HAAR DWT, NeuroQuantology, 20(18), 205-217.
- M. Divya, J. Dhilipan, **A. Saravanan** (2022) Detection of Multiple Sclerosis using Advanced Deep Learning Strategies, Journal of the Balkan Tribological Association, ISSN: 1310-4772, 29(1), 29-43.
- E. Ambica, **A. Saravanan**, V. Mercy Rajaselvi Beaulah (2018) Recognition and Classification of Aedes Aegypti using Image Processing Techniques. International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, 5(5), 664-667.
- E. Ambica, **A. Saravanan**, V. Mercy Rajaselvi Beaulah (2018) Literature Survey on Recognition and Classification of Aedes Aegypti using Image Processing Techniques. International Journal of Engineering Research and Advanced Development, 4(4), 26-36.
- S. Shruthi, K. Srimathi, T. Rashmi, **A. Saravanan** (2018) Detection and Prevention of Child Abuse Using IoT - A Survey. International Journal of Computer Science and Mobile Applications, ISSN: 2321-8363, 6(2), 139-144.
- S. Pradeep Kumar, R. Ramachandaran, **A. Saravanan** (2016) Generation of Variant Random Order (VRO) in Text Graphics Color CAPTCHA for Enhancing Web Security Protection. Indian Journal of Science and Technology, 9(10), 1-9. doi: 10.17485/ijst/2016/v9i10/88893.
- S. Pradeep Kumar, R. Ramachandaran, **A. Saravanan** (2015) Generation of text character color CAPTCHA in Fixed Time Period. *International Journal of Applied Engineering Research (IJAER) Special Issues*, ISSN 0973-9769, 10(75), 168-173. doi:10.37622/000000.
- T. Amitha, S. Radhika, R. Saranya Devi, **A. Saravanan**, O. Pandithurai (2015) A Framework for Big Data Analytics in Evidence Based Medicine. *International Journal of Applied Engineering Research (IJAER) Special Issues*, ISSN 0973-9769, 10(17), 13147-13152. doi:10.37622/000000.
- V. Parthiban, J. Praveen Kumar, R. Ramprasanth, K. Sriram, **A. Saravanan**, R. Lalitha (2015) Decentralised Disruption Tolerant Military Network for Retrieval of Data. *International Journal of Innovative Trends and Emerging Technologies (ICITET'15) Special Issue*, ISSN 2349-9842, 1(2), 107-110.

- G. Chandra Kala, P. Priyanka, C.M. Sowmya, L. Paul Jasmine Rani, **A. Saravanan (2015)** Duplication Avoidance Mechanism For Storing Data in Hybrid Cloud. *International Journal of Innovative Trends and Emerging Technologies (ICITET'15) Special Issue*, ISSN 2349-9842, 1(2), 139-141.
- **Saravanan, A.** and S. R. Balasundaram (2013) Integrated Location Aware Medical Care Services. *International Journal on Networked Business*, Springer Publications, **23(1)**, 5-14. doi: 10.1007/s12525-012-0089-z. **IF 7.8**
- Balasundaram, S. R. and **A. Saravanan (2010)** Suggesting Resource Locations in Mobile Environment. *International Journal of Engineering and Technology*, ISSN: 1793-8236, **2(1)**, 61-64. doi: 10.7763/IJET.2010.V2.101.
- **Balasundaram, S. R.** and **A. Saravanan (2010)** Resource Identification Using Mobile Queries. *ACEEE International Journal on Communication*, ISSN: 2158-7558, **1(3)**, 25-27. doi: 01.IJCOM.01.03.550.
- **Balasundaram, S. R.** and **A. Saravanan (2009)** Location Prediction Mechanisms for Tracking Lost Unmanned Vehicles. *International Journal of Computer Science and Network Security*, ISSN : 1738-7906, **9(12)**, 231-237.

International Conferences

- Monikaa. R, Saravanan. A, Padmavathi. B (2024), “Enhanced Hypertrophic Cardiomyopathy Detection Using Machine Learning on ECG Images”, *IEEE International Conference on Electronic Systems and Intelligent Computing - ICESIC-2024*, Organized by Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Nov 2024.
- Subash. K, Saravanan. A, Padmavathi. B (2024), “A Novel Method by Combining Brain Heart Signals for the Early Detection of Epilepsy Seizures”, *Proceedings of 2nd International Conference on Sustainable Computing and Smart Systems - ICSCSS 2024*. Organized by Hindusthan College of Engineering & Technology, July 2024.
- Subash. K, Saravanan. A, Padmavathi. B (2024), “A Framework for Suggesting a New Methodology for Early Detection of Epilepsy Seizure”, *7th International Conference on Inventive Computation Technologies - ICICT 2024*. Organized by Tribhuvan University, Nepal, April 2024.
- Harshini Manoharan, J. Dhilipan and **A. Saravanan (2022)**, “Non-Invasive Glucose Monitoring system for effective management of blood glucose level for Diabetes Mellitus”, *International Conference on Challenges and Opportunities in Renewable Energy Smart Systems and E-Mobility*, October 2022.
- Harshini Manoharan, J. Dhilipan and **A. Saravanan (2022)**, “A Novel methodology to manage the sedentary lifestyle of Diabetic patients based on Smart Meal Planning System”, *International Conference on Challenges and Opportunities in Renewable Energy Smart Systems and E-Mobility*, October 2022.

- Harshini Manoharan, J. Dhilipan and **A. Saravanan (2022)**, “A Comparative study on classification of Diabetes Mellitus using Machine Learning Algorithm”, *International Conference on Emerging Trends in Materials, Computing and Communication Technologies*, December 2021.
- **A. Saravanan et al. (2016)** A Framework for Monitoring Soil and Crop using Wireless Sensor Network. *In Proceedings of International Conference on Engineering Digital Green Era - EDGE2016*. Organized by Rajalakshmi Institutions, Chennai.
- S. Pradeep Kumar, R. Ramachandaran, **A. Saravanan (2015)** Generation of variant random order (VRO) in text graphics color CAPTCHA for enhancing web security protection. *In Proceedings of Global Congress on Computing and Media Technologies (GCMT 2015)*, Organized by Sathyabama University, Chennai. In association with Asia Pacific University of Technology & Innovation, Malaysia.
- S. Pradeep Kumar, R. Ramachandaran, **A. Saravanan (2015)** Generation of Text Character Color CAPTCHA in Fixed Time Period. *In Proceedings of the first International Conference on Computing and Information Technology (ICCIT 2015)*, Organized by Sri Sai Ram Institute of Technology, Tambaram, Chennai.
- T. Amitha, S. Radhika, R. Saranya Devi, **A. Saravanan**, O. Pandithurai **(2015)** A Framework For Big Data Analytics in Evidence Based Medicine. *In Proceedings of International conference on Big Data and Cloud Computing (ICBDCC'2015)*, Organized by St.Peter's University, Chennai.
- V. Parthiban, J. Praveen Kumar, R. Ramprasanth, K. Sriram, **A. Saravanan**, R. Lalitha **(2015)** Decentralised Disruption Tolerant Military Network for Retrieval of Data. *In Proceedings of First International Conference on Innovative Trends in Engineering and Technology (ICITET'15)*, Organized by All India Association for Innovative Engineers & Dhaanish Ahmed College of Engineering, Chennai.
- G. Chandra Kala, P. Priyanka, C.M. Sowmya, L. Paul Jasmine Rani, **A. Saravanan (2015)** Duplication Avoidance Mechanism For Storing Data in Hybrid Cloud. *In Proceedings of First International Conference on Innovative Trends in Engineering and Technology (ICITET'15)*, Organized by All India Association for Innovative Engineers & Dhaanish Ahmed College of Engineering, Chennai.
- **A. Saravanan et al. (2015)** A Novel Approach to deal with Life-threatening Health situations in Distributed m-Healthcare Cloud Environment. *In Proceedings of International conference on Big Data and Cloud Computing (ICBDCC'2015)*, Organized by St.Peter's University, Chennai.
- **Saravanan, A. and S. R. Balasundaram (2012)** Pruning Strategies to Refine Resource List for NN Queries in Location Based Services. *In Proceedings of 2nd International Conference on Communication, Computing & Security (ICCCS2012)*, Organized by National Institute of Technology Rourkela, Odisha. Proceedings published by Procedia Technology (Elsevier Publications), **6**, 598-605. <https://doi.org/10.1016/j.protcy.2012.10.072>.

- **Saravanan, A. and S. R. Balasundaram (2012)** Enhancing Context-aware Services in Mobile Environment. In *Proceedings of IEEE International Conference on Emerging Trends in Science, Engineering and Technology*, Organized by J.J. College of Engineering & Technology, Tiruchirappalli, Tamil Nadu (in association with IEEE and Springer), 39-44.
doi: 10.1109/INCOSSET.2012.6513878
- **Saravanan, A. and S. R. Balasundaram (2011)** Managing Uncertainty of Mobile User's Travel Path In Location Based Services. In *Proceedings of International Conference on Data Engineering and Communication Systems (ICDECS2011)*, Organized by RNS Institute of Technology, Bangalore. (**Best Paper Award**)
- **Balasundaram, S. R. and A. Saravanan (2011)** Methodologies for Handling 'Destination Unknown' Range Queries During Mobility. In *Proceedings of IEEE International Conference on Emerging Trends in Networks and Computer Communications (ETNCC2011)*, Organized by The Institution of Engineers (India), Udaipur, 429-433.
- **Balasundaram, S. R. and A. Saravanan (2009)** Mobile Data Management for Integrated Medical Care Services. In *Proceedings of Third International Conference on **healthGIS** 2009*, Hyderabad, India. Organized by AGIT, ESRI, DIGITAL GLOBE, GeoInformatics International & others, 16-19.
- **Balasundaram, S. R. and A. Saravanan (2009)** Enabling Location Based Services in Mobile Environment. In *Proceedings of Third International on Information Processing (ICIP 2009)*, Bangalore, India. Organized by University Visveswaraya College of Engineering, Bangalore University, Bangalore.
- **Premkumar, N. and A. Saravanan (2005)** AITDS: Architecture for Intrusion Tolerance Database Systems. In *Proceedings of International Conference on Information Security*, Organized by Pondicherry Engineering College, Pondicherry.

National Conferences

- Harshini Manoharan, J. Dhilipan and A. Saravanan (2023), "Predictive Analytics of Complications of Diabetes Mellitus using Bayesian Network", *National Conference on Advances in Science, Engineering and Technology*, September 2023.
- S. Pradeep Kumar, R. Ramachandaran, **A. Saravanan (2016)** Generation of Curve Based Text Color CAPTCHA for Enabling Securable Web Access. In *Proceedings of National Conference on Intelligent Computing and Data Analytics (NCICDA 2016)*, Organized by Department of Information Science & Technology, Anna University, Chennai.
- **A. Saravanan et al. (2014)** Preserving Disruption Tolerant Networks from Flood Attacks. In *Proceedings of National Conference on Recent Advances in Computing and Communications* at Shri Shankarlal Sundarbai Shasun Jain College for Women, Chennai. Organized by Computer Society of India, Chennai Chapter.
- **Saravanan, A. and S. R. Balasundaram (2011)** Hybrid Model for Locating Lost Autonomous Vehicles. In *Proceedings of Second Geomatrix Conference on Geospatial Technologies and Applications*. Organized by Centre of Studies in Resources Engineering (CSRE), IIT Bombay, India.

- Raja, R. and **A. Saravanan (2008)** Web Cache Replacement Policies: A Pragmatic Approach. *In Proceedings of Third National Conference on Emerging Trends in Computer Science & Engineering – ETICSE'08*, K.S.Rangasamy College of Technology, Tiruchengode, Tamil Nadu, India.
- Saravanan, S. and **A. Saravanan (2007)** Multiuser Video Streaming using Dynamic Bandwidth Resource Allocation. *In Proceedings of Indian Conference on Intelligent Systems – ICIS '07*, DMI College of Engineering, Chennai, Tamil Nadu, India.
- Shanmuga Sundaram, V. and **A. Saravanan (2007)** Quality Estimation of Query Results in Relational Database Environments. *In Proceedings of National Conference on Emerging Technologies*, M.Kumarasamy College of Engineering, Karur, Tamil Nadu, India.
- Sheba Selvam and **A. Saravanan (2007)** Security for Commercial Grid Environment. *In Proceedings of National Conference on Engineers meet in emerging trends*, Oxford Engineering College, Tiruchirappalli, Tamil Nadu, India.
- Suresh, J. and **A. Saravanan (2006)** Automatic Query Engine for Efficient Information Extraction from Text Databases. *In Proceedings of National Conference on Emerging trends in CSE*, K.S.R College of Engg. & Tech., Tiruchengode, Tamil Nadu, India.
- Muthahar Sheriff, A. and **A. Saravanan (2006)** Distributed Querying and Updates in XML Data Management. *In Proceedings of National Conference on Frontier Research areas in Computer Science*, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India.
- Muthahar Sheriff, A. and **A. Saravanan (2006)** Web Services based Information Integration using XML Data Management. *In Proceedings of National conference on Recent Advancement in Computing*, Noorul Islam College of Engineering, Kanyakumari, Tamil Nadu, India.
- Leena Mary, L. and **A. Saravanan (2006)** Optimized Strategy for Handling Multi Query Workloads in Data Intensive Applications. *In Proceedings of National Conference on Recent trends in Advanced Computing*, SNS College of Technology, Coimbatore, Tamil Nadu, India.
- Mohan Bapu, T. and **A. Saravanan (2006)** Database for a Non-Hierarchical File System. *In Proceedings of Second National Conference on Advances in Computer Engineering and Networking -ACENET'06*, PSNA College of Engineering & Technology, Dindigul, Tamil Nadu, India.
- Shrichandran, GV. and **A. Saravanan (2005)** XParent based XML- Extended OLAP Querying. *In Proceedings of National Conference on Recent Trends in Networking and Distributed Computing*. Organized by Pavendar Bharathidasan College of Engineering and Technology, Tiruchirappalli, Tamil Nadu, India.
- Gowthul Alam, M.M. and **A. Saravanan (2005)** Efficient Implementation of Blind Signature. *In Proceedings of National Conference on Recent Trends in Networking and Distributed Computing*. Organized by Pavendar Bharathidasan College of Engineering and Technology, Tiruchirappalli, Tamil Nadu, India.

- Boominathan, P. and **A. Saravanan (2005)** Message Tracking in SOAP based Web Services. *In Proceedings of National Conference on Recent Trends in Networking and Distributed Computing*. Organized by Pavendar Bharathidasan College of Engineering and Technology, Tiruchirappalli, Tamil Nadu, India.
- Zaheer Baig, A. and **A. Saravanan (2005)** Fast Packet Authentication Code. *In Proceedings of National Conference on Recent Trends in Networking and Distributed Computing*. Organized by Pavendar Bharathidasan College of Engineering and Technology, Tiruchirappalli, Tamil Nadu, India.
- Rajeeramani, S. and **A. Saravanan (2005)** Performance Evaluation for Scalable Wireless Routing Algorithm. *In Proceedings of 5th National Conference on Advanced Computing*, PSG College of Technology, Coimbatore, Tamil Nadu, India.

Book Publications

- *Electronic Devices*, (ISBN 978-93-85977-11-4), Shanlax Publications, 2023
- *Fundamentals of Computer Programming*, VRB Publications, 2004.

Consultancy Works

- Guided the students to do a few research works in the area of **network security** for the leading IT industries (NEC, Chennai)

Patent Work

Title of the invention : DIY Ventilator with Blood O2 Sensing using Arduino for Covid Pandemic (Status : Published)

Professional Services

- **Conference Technical Session Chair:** IEEE Sponsored Second International Conference on Science Technology Engineering and Management-2016 (ICONSTEM-2016), 30th – 31st March 2016, Organized by Jeppiar Engineering College, Chennai.
- **Workshop Coordinator:** National level workshop on Green Mobile Communication, 2nd to 4th June 2014, Organized by Rajalakshmi Institutions, Chennai, India.
- **Conference Key note Speaker and Chair:** NCIC'13 – Third National Conference on Innovation in Computing, 7th March 2013, organized by Department of Computer Science & Engineering, K.Ramakrishnan College of Engineering, Tiruchirappalli, TamilNadu, India.
- **Conference Key note Speaker and Chair:** NCRET'12 –National Conference on Recent Trends in Emerging Technologies, 6th March 2012, organized by Department of Information and Communication Engineering, Kurinji College of Engineering and Technology, Tiruchirappalli, TamilNadu, India.
- **Conference Convener and Co-Chair:** INCOSSET 2012 – International Conference on Emerging Trends in Science, Engineering & Technology, 13th & 14th December 2012, organized by J.J. College of Engineering, Tiruchirappalli, TamilNadu, India.

- **Conference Co-Convener:** D-Soft 2007 - National Conference on Distributed and Soft Computing, 1st and 2nd March 2007, organized by Department of Computer Science & Engineering at J.J College of Engineering & Technology, Tiruchirapalli, TamilNadu, India.
- **Conference Co-organizer:** e-education 2004 - National Conference on e-education, 27th & 28th August 2004, organized by Department of Computer Science & Engineering with CSI Trichy Chapter at J.J College of Engineering & Technology, Tiruchirapalli, TamilNadu, India.

Assignment and Duties Performed (for the past two and a half decades)

For Academic

- Involved in Starting new Programmes for both UG and PG
- Involved in Curriculum Development for U.G & P.G Programmes
- Involved in formulating International MoUs with leading Universities & Industries
- Involved in achieving University Examinations Ranking Position
- Provided Guidance to Students of both UG and PG for their Academic Projects
- Prepared the Academic Strategies for Enhancing the Academic Results
- Prepared the MIS review formats for Faculty, Department and Institutions
- Introduced the Faculty Monthly Performance Review System
- Enhanced the Faculty Annual Performance Appraisal Format
- Conducted Faculty Induction/ Orientation Programmes
- Organized International/National level Conferences for researchers
- Organized Faculty Development Programmes for young teachers
- Organized many number of Seminars and Workshops for Students and Faculty
- Presented many number of Guest lectures in IT related areas
- Motivated the Faculty and Students for presenting papers in Conferences/Journals
- Motivated the Faculty and Students for attending Seminars/Workshops
- Motivated the Faculty for book publications

For Organization Development

- **Established a new campus of SRM at Tiruchirappalli (Tamil Nadu) as a Special Officer** ((Multidisciplinary)
- Involved in Overall Development and Administration of SRM Group of Institutions (Multidisciplinary) – Ranking & Accreditation works
- Involved in Faculty Recruitment and Periodical Appraisal Process
- Placement, Global awareness and Career Counseling for students

For Society Development

- Organized workshops on ‘Computer Training’ to Govt. officials for every year
- Organized a few workshops on ‘Computer Training’ to School teachers and Students

FDPs/Workshops/Seminars Attended

- Two day FDP on ‘Artificial Intelligence’ conducted from 7th to 8th January 2016, Organized by Department of CSE, Velammal Engineering College, Chennai.
- Two day FDP on ‘Artificial Intelligence’ conducted from 16th to 17th December 2015, Organized by Department of CSE, Rajalakshmi Institute of Technology, Chennai, India.
- Three day workshop on ‘Mission10x for Engineering Faculty’ conducted from 26th to 28th November 2015, Organized by Wipro Limited at Rajalakshmi Engineering College, Chennai.
- One day Workshop on ‘Kanitamil Payilarangam’ conducted on 30th October 2015, Organized by Anna University, Chennai.
- One day Workshop on ‘Internet of Things’ conducted on 27th October 2015, Organized by Rajalakshmi Engineering College, Chennai.
- One day FDP on ‘Knowledge Management (KM) for Business Sustainability & Transformation” conducted on 6th July 2015, TCS Siruseri, Organized by TCS Consultancy Services, Chennai.
- Two Day FDP on ‘CS6551 Computer Networks’ conducted from 15th to 16th December 2014, Organized by Department of CSE, Rajalakshmi Institute of Technology, Chennai, India.
- One day State Level Seminar on ‘Recent Trends in Computing and Communication’ conducted on 8th August 2014, Organized by Department of CSE, Rajalakshmi Institute of Technology, Chennai, India.
- Three Day National level workshop on ‘Green Mobile Communication’, conducted from 2nd to 4th June 2014, Organized by Rajalakshmi Institutions, Chennai, India.
- Two day STTP on ‘AJAX’ conducted from 27th to 28th January 2014, Organized by NIT Trichy.
