DEPARTMENT OF COMPUTER SCIENCE

Jayaraj Annapackiam College for Women (Autonomous), Periyakulam

Theni District, Tamil Nadu, India



Dr. Sr. A. Arul Anitha, MCA., Ph.D., NET., Assistant Professor Department of Computer Science

PERSONAL DETAILS

Date of Birth	:	10. 07. 1978
Qualification	:	MCA., Ph.D., NET.,
Designation	:	Assistant Professor
Department	:	Computer Science
Mobile No	:	8270221978
E-mail	:	<u>arulanita@gmail.com, sranitacs@annejac.ac.in,</u> arulanitha_phdcs@sjctni.edu

EDUCATIONAL QUALIFICATIONS							
Degree	Specialization	College	University	Year of Passing			
B. Sc	Computer Science	J.A. College, Periyakulam	M.K University, Madurai	2002			
MCA	Computer Applications	St. Xavier's College, Palayamkottai	M.S. University, Tirunelveli	2006			
NET	Computer Applications	UGC NET- Decem	2018				
Ph. D	Security in IoT	St. Joseph's College, Tiruchirappalli	Bharathidasan University, Trichy	2022			

ACADEMIC IDENTITY

ORCID	:	0000-0002-1256-5418
SCOPUS ID	:	57211289098
Researcher ID/ PUBLONS ID	:	AAB-9169-2022
Google Scholar	:	SSOg5JoAAAAJ
VIDWAN-ID	:	324078
ResearchGate	:	https://www.researchgate.net/profile/Dr-Anitha- 2/stats

PROFESSIONAL EXPERIENCE	
2006- 2012 2022 till date	: Assistant Professor, Department of Computer Science Jayaraj Annapackiam College for Women
Projects Guided	Periyakulam : UG - 14 PG - 8

MEMBERSHIP					
S.No.	Membership ID	Organization			
1.	324938	International Association of Engineers (IAENG)			
2.	198358011264	Computer Science Teachers Association (CSTA)			
3.	FRTJQC-CE004431	International Association of Academic Plus Corporate (IAAC)			

JOURNAL REVIEWER

- 1. The Computer Journal, Oxford Academic, British Computer Society, ISSN:1460-2067 (Scopus and WoS Indexed)
- 2. Iraqi Journal of Science, University of Baghdad, ISSN:0067-2904 (Scopus Indexed)
- 3. Computers and Security, Elsevier Publishers, ISSN: 0167-4048 (Scopus Indexed)
- 4. International Journal on Artificial Intelligence Tools, World Scientific Publishers, ISSN:0218-2130 (Scopus Indexed).

Awards Received

Best Researcher -2020	:	St. Joseph's College (Autonomous), Tiruchirappalli
Arivootru Aalumai Award	:	Pasumai Vaasal Foundation, Palm Tree Protection Society, Sri Success Academy, Divine Tamil, Trust, and World Tamil Literature Training Centre
Kalvi Chudar Mani Award	:	Pasumai Vaasal Foundation, Palm Tree Protection Society, Sri Success Academy, Divine Tamil, Trust, World Tamil Literature Training Centre, Sri Highagreever Arts and Cultural Academy
Mei Gnanam Olichemmal Award	:	Pasumai Vaasal Foundation and Sri Success Academy
Vajra Kodi Award	:	Pasumai Vaasal Foundation and Sri Success Academy
Engal Aasaan	:	Pasumai Vaasal Foundation

DETAILS OF RESEARCH WORK - PH.D

Research Centre	:	St. Joseph's College (Autonomous), Tiruchirappalli
University	:	Bharathidasan University, Tiruchirappalli
Research Duration	:	2018 November- 2022 April (Full-Time)
Research Supervisor	:	Dr. L. Arockaim Associate Professor Department of Computer Science St. Joseph's College (Autonomous), Tiruchirappalli
Title of the Thesis	:	Techniques to Detect Resource Attacks in RPL-based Internet of Things
Viva-Voce	:	21.09. 2022

Research Interests

- 1. Computer Networks and Security
- 2. Data Mining
- 3. Internet of Things
- 4. Security Attacks IoT
- 5. Artificial Intelligence and Machine Learning

RESEARCH PROJECT

Project Title	: Promoting a Clean and Hygienic Environment using	ІоТ
Project Agency	: St. Joseph's College- Research Grant	
Amount	: Rs. 15, 000/-	
Year	: 2019-2020	

BOOKS PUBLISHED							
Authors	Book Name	Publication Details	Year				
A.Punitha Jilt, Dr. A. Arul Anitha	Python Programming	JBR TRI SEA Publishers ISBN: 9788195269877	2022				

PAPER PUBLICATION

- A. Arul Anitha, "Network Security using Linux Intrusion Detection System", International Journal of Research in Computer Science, eISSN 2249-8265 Volume 2 Issue 1 (2011) pp. 33-38
- A. Arul Anitha, A. Stephen and Dr. L. Arockiam, "A Hybrid Method on Smart Irrigation System", International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277 - 3878, Volume 8, Issue 3, 2019, pp. 2995 - 2998, (Scopus Indexed).
- A. Arul Anitha and Dr. L. Arockiam, "ANNIDS: Artificial Neural Network based Intrusion Detection System for Internet of Things", International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume 8, Issue 11, 2019, pp.2583-2588. (Scopus Indexed)
- A. Arul Anitha and Dr. L. Arockiam, "Promoting a Clean and Hygienic Environment using IoT", International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277-3878, Volume 8, Issue 5, 2020, pp. 4722-4726. (Scopus Indexed)
- A. Arul Anitha and Dr. L. Arockiam, "VeNADet: Version Number Attack Detection for RPL based Internet of Things", Solid State Technology, Volume 64, Issue 2, 2021, pp.2225-2237. (Scopus Indexed)
- A. Arul Anitha and Dr. L. Arockiam, "Ada-IDS: AdaBoost Intrusion Detection System for ICMPv6 based Attacks in Internet of Things", International Journal of Advanced Computer Science and Applications, Volume 12, Issue 11, December 2021, pp. 499-506. (Scopus and WoS Indexed)
- A. Arul Anitha and Dr. L. Arockiam, "A Review on Intrusion Detection Systems to Secure IoT Networks", International Journal of Computer Networks and Applications", ISSN: 2395-0455, Volume 9, Issue 1, February 2022, pp.38-50 (Scopus Indexed)
- A. Stephen, A. Arul Anitha and Dr. L. Arockiam, "Cloud Computing: Opportunities and Challenges", ReTeLL, Vol. 21, June 2019,

Resource Person							
S.No.	Event	Title	Venue	Date			
1.	National Level Seminar on IoT Applications Design: Issues and Challenges	Cyber Attacks in IoT	Paavai Engineering College	24.01.2019			
2.	One day Orientation Programme on Life Coping Skills	Emotional Intelligence	St. Anne's College of Engineering and Technology, Anguchettipalayam, Panruti	15.07.2019			
3.	DBT sponsored course on Recent Technologies for Innovation	Security Issues in Internet of Things	St. Joseph's College (Autonomous), Tiruchirappalli	4.12.2019			
4.	Guest Lecture for PG Science Students	Research and Innovation	J.A College, Periyakulam	06.02.2020			
5.	Computer Science - Association Inauguration	Cyber Security	J.A College, Periyakulam	10.08.2022			
6.	47 th Traditional Games and Sports Day	Presidential Address -Holistic Development of Children	Infant Jesus Nursery and Primary School, Royappanpatti	9.11.2022			
7.	Three-day Seminar On Impacts of Social Media	Impacts of Social Media	St. Anne's Novitiate, Crawford, Trichy	8- 10, December, 2022			
8.	JAC- NSS Camp	Career Guidance and Higher Studies for High School Students	Murugamalai	12.12.2022			
9.	JAC- NSS	Skill Development – One of the Keys to Empower Youth	J. A. College, Periyakulam	23.01.2023			
10.	One day Faculty Development Programme	Empowering the Educators	Annai Velankanni Polytechnic College, Anguchetttipalayam, Panruti	07.06.2023			
11.	Seminar for School Children	Emotional Intelligence	St. Anne's Matric. Hr. Sec. School, Thattanchavadi	08.07.2023			
12.	Seminar for School Teacher	Effective Skills for Teachers	St. Anne's Matric. Hr. Sec. School, Thattanchavadi	08.07.2023			
13.	NSS Day Celebration	Not me, but You	J. A. College, Periyakulam	22.09.2023			
14.	Voting Awareness for Day Star Students	Voting Awareness	J.A. College, Periyakulam	03.04.2024			

PAPER PRESENTATIONS						
S.No.	Conference/Seminar	Title of the Paper	Venue	Date		
1.	International Conference on Emerging Trends in Computer Science, Communication and Information Technology- CSCIT2010	Security Issues in Mobile Ad hoc Network	Yeshwant Mahavidhyalaya, Nanded, Maharastra	09-11, January, 2010		
2.	National Conference on Digital Vision 2020	Impact of ICT on Library Information System	Jayaraj Annapackiam College for Women (Autonomous), Periyakulam	5 th & 6 th March, 2010		
3.	National Conference on Technology in Society: Challenges & Opportunities	Rural Outsourcing: Opportunities and Challenges	Salesian College, Siliguri, West Bengal	5th & 6th October, 2010		
4.	National Conference on Integration of ICT and Pedagogy in Education	Integration of ICT into Rural Schools	St. Anne's College of Education for Women (Periyakulam)	12 th November, 2011		
5.	International Conference on Recent Trends in Information Processing and ICIPC 2012	Protecting Network using Linux Intrusion Detection System	Nadar Saraswathi College of Arts and Science, Theni	6th and 7th January, 2012.		
6.	International Conference on Comprehensive Disaster Management ICCDM 2012	Ethical Issues in Disaster Management	Noorul Islam University, Kumarakovil,	27th & 28th January, 2012		
7.	5th National Conference on Research and Development in Science, Engineering and Technology (NCRDSET'19)	for Smart Irrigation	St. Anne's College of Engineering and Technology, Anguchettipalayam, Panruti.	28 February, 2019		
8.	International Conference on Research and Development in Science, Engineering and Technology (ICRDSET'21)	DISDet: DODAG Information Solicitation Attack Detection in IPv6 based Low Power Lossy Networks	St. Anne's College of Engineering and Technology, Anguchettipalayam, Panruti.	05 March, 2021		

ONLINE COURSES COMPLETED

- Fortinet's Network Security Expert Level 1 Certification on "Network Security Associate- The Threat Landscape", FORTINET, NSE Institute (USA) on 23rd January, 2020.
- Fortinet's Network Security Expert Level 2 Certification on "Network Security Associate- The Evolution of Cyber Security", FORTINET, NSE Institute (USA) on 25th January, 2020.
- Completed 2 days online Course on "Household Electrical Devices and Appliances", organised by Department of Physics, AVS College of Arts and Science, Salem from 20.4.2020 to 21.04.2020.
- 4. Completed the online Course on "Artificial Intelligence- An Innovative Paradigm for Smart Computing" conducted BECH-RUSA 2.0, Bharathidasan University, Tiruchirappalli, April & May 2020 (5 days-1 hour per day)
- 5. Completed the online Course on **"Big Data Analytics"** conducted by BECH-RUSA 2.0, Bharathidasan University during May, 2020.
- 6. Completed NPTEL Online Certification on Machine Learning, ML, in Feb-April, 2020.
- 7. Completed a Course on **Data Analysis using Excel** conducted by the Great Learning Academy in April 2023.
- 8. On 02.03.2024, completed an online course on "**Introduction to Generative AI**", offered by Google.

WORKSHOP/HANDS-ON TRAINING/SHORT-TERM COURSE/FDP ATTENDED

- 1. Participated in the State Level Workshop on **Data Mining Research Using Open Source Tools** on 28.08.2010 at Nadar Saraswathi College of Arts and Science, Theni.
- 2. Participated in the Workshop on **Higher Education in a Challenging Environment** on 26th & 27th November, 2010 held at J.A. College (Autonomous), Periyakulam.
- 3. Participated in the State Level Workshop on **Signal & Image Processing Using MATLAB**, organised by Department of Computer Science, J.A. College (Autonomous), Periyakulam, on 20th & 21st December, 2010.
- 4. Participated in the Workshop on **Statistical Package** organized by the Department of Computer Science, J.A. College (Autonomous), Periyakulam, on 20th & 21st February, 2012.
- 5. Participated in the 5-day "**IoT Bootcamp**" conducted by iB Hubs from 11th July, 2018 to 15th July, 2018 at SRM institute of Science and Technology, Chennai.
- Participated in the three-day National Workshop on Cryptology (NWC-2018) organized by CR Rao Advanced Institute of Mathematics, Statistics and Computer Science (AIMSCS) in Association with Cryptology Research Society of India (CRSI) from 5th to 7th September, 2018 at University of Hyderabad Campus, Hyderabad.

- 7. Participated in the one-day National Workshop on "**How to write effective Research Papers for Conferences and Journals and Project Proposals for Funding Agencies**" on 28th September, 2018 at Kongu Engineering College, Erode.
- 8. Participated in the one-day National Workshop on "**Internet of Things for Smart Grid**" organized by National Power Training Institute, Neyveli on 26th October, 2018 at Trichy.
- Participated in the two days National Level Workshop on "Secure Internet of Things (SIoT)" organized by St. Joseph's Institute of Technology, Chennai in association with Pristine InfoSolutions Pvt. Ltd., Mumbai on 20th-201st November, 2018.
- 10. Participated in the three-day National Level Hands-on Workshop **on Network Simulator (ns-3)** at PSG College of Technology from 14th to 16th February, 2019.
- 11. Participated in the TEQIP-III sponsored two days "International Hands-on Workshop on Machine Learning for Engineers" organised by PSG College of Technology, Coimbatore in association with Kloudlogic Inc, Texas, USA during 12th & 13th April, 2019.
- 12. Participated in the three days Hands on Workshop **on "Machine Learning Algorithms for IoT Applications"** held at Mepco Schlenk Engineering College, Sivakasi from 6th to 8th, May, 2019.
- Participated in the one-week Faculty Development Programme on "Emerging Networking Technologies and Tools- Research Perspective" organized by PSG College of Technology from 7th to 13th June, 2019.
- 14. Participated in the ten-day Capacity Building Workshop under PMMMNMTT scheme/MHRD/GOI on "Sharpen the Research Skills" at School of Education Pondicherry University, Pondicherry from 24th July, 2019 to 2nd August, 2019.
- Participated in the TEQIP-III sponsored One Week Faculty Development Programme on "Cyber Security and Ethical Hacking- Securing the Connected World" at Government College of Engineering, Salem from 22nd January, 2020 to 28th January, 2020.
- 16. Participated on 01.03.2020 in the **Python 3.4.3 training** organized at Vellalar College for Women (Autonomous) in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.
- 17. Participated **"One week Faculty Development Programme-Python & LaTex**" through Moocs-Spoken Tutorial Project-IIT Bombay from 23rd April, 2020 to 29th April, 2020.
- Participated on 22nd May, 2020 in the Python 3.4.3 training organized at Sona College of Technology in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.
- Participated in Online Faculty Development Program (FDP) "Are You IoT Ready? Join Configuration of Smart Home using CISCO Packet Tracer" hosted by Department of Computer Science & Engineering, Jain Deemed University on May 23, 2020.
- 20. Participated in a Three day online FDP on "E-Content Development using Open Source Tools" from 27th May 2020 to 29th May, 2020 organised by the Dr.M.G.R

Educational and Research Institute Chennai and Universal Teacher Academy Puducherry.

- 21. Participated in Ten days International online Workshop on "Effective Research Methodology" organised by Tamil Nadu Open University Chennai and Thiagarajar College of Preceptors, Madurai from 3rd June 2020 to 12th June 2020.
- 22. Participated in one day Workshop on "Neural Networks Journey from Shallow to **Deep Learning**" hosted by Department of Information Science and Engineering, Jain Deemed University on June 5, 2020.
- 23. Completed online Faculty Development Programme on "Emerging Trends in Data Analytics and Cyber Security" organised by the PG Department of Computer Science and Applications, Islamiah Women's Arts and Science College, Vaniyambadi from 11th June to 13th June, 2020.
- 24. Completed the Three days International Virtual Faculty Development Program (FDP) on **"Educational Strategies for Universal Learners"** organized by School of Education, VISTAS, Chennai from 22.06.2020 to 24.06.2020.
- 25. Participated in the one-week online capacity building Training Programme on "Digital Pedagogy" organized by Tamil Nadu Teacher Education University, Chennai from 21.08.2020 to 27.08.2020
- 26. Participated in the AICTE sponsored six days online Short-Term Training Program (STTP) on "IoT based WSN using Cooja Network Simulator" from 5th November to 11th November 2020, organized by the Department of Electronics and Communication Engineering, IFET College of Engineering, Villupuram.
- 27. Participated in the AICTE Sponsored six days online Short-Term Training Programme (STTP) Slot-III on "Data Analytics and Supporting Services using Machine Learning" conducted by Department of Computer Science and Engineering, Dhirajlal Gandhi College of Technology, Salem from 30th November to 5th December, 2020.
- 28. Participated in the International Faculty Development Programme on **Online Teaching Metrics** organised by the Department of Commerce, SRM Institute of Science and Technology, Ramapuram Campus, Chennai from 12th to 18th May, 2021.
- 29. Participated in the One-week International Faculty Development Programme on **Blockchain with Cyber Security** organized by Easwari Engineering College, Chennai from 24th to 29th May, 2021.
- 30. Participated in the One Week FDP on Ethical Hacking organized by the Department of CSE (Data Science, Cyber Security and Artificial Intelligence & Data Science), VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad from 8th to 13th August, 2022.
- 31. Participated in the International FDP on **Innovation in Recent Trends in Computing**, organised by the Department of CSE, JIS College of Engineering from 28th November to 2nd December, 2022.
- 32. Participated in the 10 Days Workshop on "Capacity Building Program in Cyber Security and its Investigation", organized by the Research Foundation of India & RFI-CARE from 01-10 May, 2023.

- Participated in the Five Days online FDP on "Trends in Technological Intelligence 2023 (T21-2023)", organized by Babu Bansari Das Northern India Institute of Technology, Lucknow from 21st to 25th August, 2023.
- 34. Completed two weeks National Level Workshop on **Online Teaching Tools** organized by ESSGEE DIGISKILLS from 09.09.2023 to 22.09.2023.
- 35. Attended the FDP Course on **Research Ethics in Higher Education** organized by Rani Anna Government College for Women, Tirunelveli and Globethics, Bangalore from 18th to 25th September, 2023.
- 36. Participated in the 15 Days National Level workshop on "Flipped Classroom Teaching Tools" from 14th to 30th September, 2023 organized by Essgee Digi Skills Learning Centre.
- 37. Participated in the Faculty Development Programme on "Deep Learning Case Studies" organized by Tata Consultancy Services (TCS) at Christ (Deemed to be University), Bangalore from 25th October, 2023 to 31st October, 2023.
- 38. Completed a UGC-Approved 6-day Short-Term Programme on "Design & Development of e-Content for Online Learning and MOOCs", organized by Indira Gandhi National Open University from 29.01.2024 to 03.02.2024 with 'A+' Grade.

CONFERENCE/SEMINAR/WEBINAR/ATTENDED

- 1. Participated in the two days UGC sponsored National Conference on **Recent Trends in Understanding and Applying the Theory and Practice of Values** organised by J.A. College (Autonomous), Periyakulam on 11th &12th January, 2007.
- Participated in the National Conference on Computer Science and Communication Technology organized by the Department of Computer Science, St. Joseph's College (Autonomous), Tiruchirappalli on 16th & 17th February 2007.
- 3. Participated in the National Seminar on **Participative and Responsive Organizational Dynamics for Quality Improvement in Autonomous Colleges** at J.A. College (Autonomous), Periyakulam on 19th & 20th December, 2007.
- 4. Participated in the National Conference on **Research Areas in Computer Science** on 24-25, April, 2008 at SRM University, Ramapuram Campus, Chennai.
- 5. Participated in the State level Seminar on **Christian Values for Wholesome Life** at J.A. College (Autonomous), Periyakulam on 29th August, 2008.
- Participated in the UGC sponsored National Conference on Higher Education and National Development: The Challenge of Expansion, Quality and Inclusion on 30th & 31st January, 2009 at St. Joseph's College (Autonomous), Tiruchirappalli.
- Participated in the National Conference on Quality and Relevance in Higher Education- New Challenges organized by IQAC, Jayaraj Annapackiam College for Women (Autonomous), Periyakulam, held on 2nd and 3rd March, 2009.

- 8. Participated in the National Conference on **Computer Science and Engineering** (NCCSE-2020), organized by Department of Computer Science, J.A. College (Autonomous), Periyakulam on 24th and 25th February, 2010.
- Participated in the UGC sponsored National Conference on Inclusion of Values for Holistic Life Amidst Technological Scenario on 6th & 7th December, 2010 at J.A. College (Autonomous), Periyakulam.
- 10. Participated in the UGC sponsored National Seminar on **Human Rights** organized by IQAC, J.A. College (Autonomous), Periyakulam on 9th & 10th December, 2010.
- Participated in the National Level Seminar on Research Issues in Computer Applications, held on 8th January, 2011 at Sri Meenakshi Government College for Women (Autonomous), Madurai-2.
- 12. Participated in the seminar on **"Research Ethics"** on 15th October, 2018 at St. Joseph's College (Autonomous), Tiruchirappalli.
- Participated in the International Conference on "Innovative Intelligent Computing and Applications" conducted by Idhaya College for Women, Kumbakonam on 28th August, 2019.
- Participated in the Seminar on "Dynamics of Research Quality", organised by Arrupe Library, St. Joseph's College (Autonomous), Tiruchirappalli on 15th October, 2019.
- 15. Participated in the webinar on Skill-Based English Language Teaching held on May 13th, 2020 at 11:00 AM on Zoom, hosted by the Government Arts and Commerce College, At.Netrang, Dist. Bharuch.
- 16. Participated in the National Level online Webinar Programme on "**IoT and its Application**" organised by the Department of Computer Science, SLS.MAVMM. Ayira Vaisyar College, Madurai on 27.05.2020.
- 17. Participated in a Webinar on "**Common Errors in the Construction of Doctoral Thesis**" organised by St. Xavier's College of Education (Autonomous), Palayamkottai, Tirunelveli on 30th May, 2020.
- 18. Participated in the International Webinar on "Web Development in Python using Pycharm" on 2nd June, 2020 hosted by the Department of Computer Science and Engineering, St. Anne's College of Engineering and Technology, Anguchettipalayam, Panruti.
- 19. Participated in the webinar on "**Machine Learning**" organized by PG & Research Department of Mathematics, Loyola College, Chennai, during 15-16 June, 2020.
- Participated in Three Days International Tech Summit titled "Next Generation Smart Machines (NGSM v1.0)" organised by the Department of Computer Science and Engineering, Karunya Institute of Technology and Sciences from 27.07.2020 to 29.07.2020.
- 21. Participated in a Webinar on **How to write a Book?** organised by Mahiya Research Lab and ESN Publication on 6th June, 2021.
- 22. Participated in the Seminar on **IP Awareness Program Under National Intellectual Property Awareness Mission**, organized by the Intellectual Property Office, India,

in Jayaraj Annapackiam College for Women (Autonomous), Periyakulam on 16th December, 2022.

- 23. Participated in the International Webinar on **Emerging Trends in Cyber Security** (IWETCS'22), organized by the Department of Computer Science, Jayaraj Annapackiam College for Women (Autonomous), Periyakulam in collaboration with Salesian College, Sonada-Siliguri, West Bengal on 20th December, 2022.
- National Webinar on "Chat GPT for Coding", organised by the Department of CSE, JIS College of Engineering in Collaboration with Zreyas Technology Pvt. Ltd on 16th February, 2023.
- 25. Participated in the Webinar on "Leadership in Education for 21st Century", conducted by the IQAC of Loyola College of Education, Chennai on 12.05.2023.
- 26. Participated in the Webinar on "Applications of Big Data Technologies", on 29th August, 2023 organized by the Centre for Development of Advanced Computing (C-DAC), Govt. of India, Noida.
- 27. Participated in the National Webinar on "**Essential E-Resource for Research**", on 7th March, 2024, organized by St. Joseph Vaz College Cortalim, Goa, Research and Development Cell in collaboration with Balani Infotech, Noida.

Declaration:

I, hereby declare that the above furnished details are true to the best of my knowledge and belief.

Dr. A. Arul Anitha, MCA., Ph.D., NET., Assistant Professor Department of Computer Application J.A. College (Autonomous), Periyakulam Tamil Nadu, India.