

**Name** : Dr. A. Nirmala  
**Designation** : Professor & Head  
**Department** : Computer Science with Cognitive Systems  
**Qualification** : M. C. A., M. Phil., Ph. D.,  
**Experience** : Teaching - 22 Years | Research - 18 Years  
**Specialization**: Image Processing  
**Email** : nirmala@drngpasc.ac.in



### Academic Qualifications

Degree	Branch	Institution / University Name	Year
Ph.D.	Computer Science	Bharathiar University	2019
M.Phil.	Computer Science	Mother Teresa Women's University	2004
MCA	Computer Applications	Sri Sarada Niketan College of Science for Women	2001
B.Sc.	Mathematics	Nirmala College for Women	1998

### Additional Qualifications

Dip./ Cert.	Area of Specialization	Institution / Agency Name	Year
Certificate	C Programming	Certificate	2017
Certificate	Annual Refresher Programme In Teaching (ARPIT) - March 2019, Latest Trends in Pedagogy and Assessment	SWAYAM - IIT Kanpur	2019
Certificate	Introduction to Internet of Things	Certificate	2019
Certificate	Expert Insights on Digital Marketing	Infosys Springboard	2023
Certificate	Basic CSharp Programming	Infosys Springboard	2023
Certificate	Java Programming	Infosys Springboard	2024

### Research Guidance

Programme	No. of Scholars	
	Completed	Pursuing
Ph. D.	-	3
M. Phil.	6	-

## Research Publications (Indexed)

### *International:*

- Dr.V. Shobana, Dr.A.Nirmala, “**Role Of Cyber Security In Mitigating Challenges, Threats And To Enhance Prevention Methods In The Modern Digital Era**”, Journal of Propulsion Technology, Volume 44, Issue 06, December 2023. ISSN:1001-4055 (Indexed in Scopus)
- M.Nagarani, Dr.A.Nirmala,” **Survey On Blockchain - Applications, Features And Challenges**”, International Journal for Research in Engineering Application &Management, Volume 9,Issue 10, January 2024,ISSN: 2454-9150. (Indexed in UGC)
- T. Kosalairaman, Dr.A.Nirmala, ”**Prediction Of Groundnut Leaf Disease Detection And Classification-Comparative Review Of Machine Learning Techniques And Their Analysis**”, Journal of Harbin Engineering University, Vol 44 No. 5 May 2023, pp. 371-378, ISSN: 1006-7043 (Indexed in Scopus)
- Dr. M. Savithri, Dr. K. Thenmozhi, Dr. A. Nirmala,” **Automatic Attendance Monitoring in Iot Using Face Recognition**”, Journal of Emerging Technologies and Innovative Research (JETIR), Volume 10, Issue 5, May 2023, pp: 136-139, ISSN:2349-5162. (Indexed in UGC)
- A.Nirmala, C. Kumuthini, M. Savithri,” **Applications of Iot in Agriculture**”, International Journal of Scientific Research in Computer Science, Engineering and Information Technology, Volume 7 Issue 2 – March-April 2021, pp. 35-39, ISSN: 2456-3307 (Indexed in UGC)
- Kumuthini, Dr. A. Nirmala, K. Gomathy,” **Integration of Wifi With Wimax Technology in Vehicular Ad-Hoc Networks**”, International Journal of Scientific Research in Computer Science, Engineering and Information Technology, Volume 7 Issue 2 – March-April 2021, pp. 35-39, ISSN: 2456-3307 (Indexed in UGC)
- K.Thenmozhi, A.Nirmala, M.Savithri,”**Block Chain Technology To Revolutionize The Supply Chain Industry And Its Challenges**”, Journal of Information and Computational Science, Volume 10 Issue 7 - 2020,July 2020,pp. 217-223, ISSN: 1548-7741 (Indexed in UGC)
- Dr.A.Nirmala,”**Brain Tumor Segmentation Using Multi Level Thresholding Using Fuzzy Entropy**”,International Journal of Recent Technology and Engineering(IJRTE),Vol-8,Issue-5,January 2020,pp. 2641-2643,ISSN:2277-3878 (Indexed in Scopus)

- Dr.A.Nirmala, "**Image Quality Metrics For Brain Image Segmentation**" ,Journal of Emerging Technologies and Innovative Research(JETIR),Volume 7,Issue 1,January 2020,ISSN:2349-6162.(Indexed in UGC)
- Dr.A.Nirmala, "**Brain Tumor Image Segmentation Using Kernel Based Fuzzy C Means Clustering(Kfcm) Algorithm**", International Journal for Research in Engineering Application &Management, Volume 5,Issue 10, January 2020,ISSN: 2454-9150. (Indexed in UGC)
- Jeevanandhini.P,A. Nirmala, "**Interpretable Recommendation for Normal Behavior and Detect Fraud in Graphs with Time** ", Journal of Emerging Technologies and Innovative Research, Vol 5,Issue 11,November 2018,ISSN:2394-739X.(Indexed in UGC)
- A.Nirmala, "**Medical Image Denoising By Nonlocal Means With Level Set Based Fuzzy Segmentation** ", Indian Journal of Science and Technology, Vol.10(36), pp. 1-11,,September 2017,ISSN: 0974-6846 , DOI: 10.17485/ijst/2017/v10i36/112402, (Indexed in Web of Science).
- A.Nirmala,V.Sridevi,"**Review on Inspection of Welding Defects Using Segmentation Techniques**" , International Journal of Scientific and Engineering Research ,Vol. 5, Issue 2, February 2014 ,pp.276-278,ISSN :2259-5518. (Indexed in UGC)
- A.Nirmala, K.A.Vanitha "**Effective Concept-Based Mining Model for Text Clustering** " , International Journal of Scientific and Research Publications, Vol. 4, Issue. 7, July 2013, pp:1473-1480, ISSN 2229-5518. (Indexed in UGC)

#### **Other Publications: International / National Journals**

- A.Nirmala, " **An Investigation of Image Segmentation Method for Remotely Sensed Hyperspectral Images With Region Object Aggregations** ", International Journal of Computer Applications, Vol. 135 No.8, pp.5-9 ,February 2016,ISSN: 0975 - 8887 , DOI: 10.17485/ijst/2017/v10i36/112402, (Indexed in Google Scholar).
- Suganya.K, A.Nirmala "**Proper Relay Reduction and Route Breakage Prediction in Bluetooth Scatternet Scheduling**", International Journal of Engineering and Computer Science, Vol. 3, Issue. 12, pp.9712-7242, December 2014, ISSN 2319-724 (Indexed in Google Scholar).
- A.Nirmala, G. SudhaAnanthi "**Classification of Exact Identification of Cancer Using Expressions of Support Vector Machines with Fuzzy C-Means Clustering** " , International

Journal Of Engineering And Computer Science , Vol. 2, Issue. 6, June 2013, pp.1845-1849, ISSN:2319-7242(Indexed in Google Scholar).

- V.Sridevi, A.Nirmala, "**Inspection of Welding Images Using Segmentation Techniques**" ,International Journal of Engineering Research & Technology ,Vol.2 Issue. 3, March 2013, pp.1-8, ISSN: 2278-0181(Indexed in Google Scholar).
- Ms.A.Nirmala, Jeevanandhini,"**Learning Probabilistic User Behavior Models from Database Access Log**", International Journal for Research in Science, Engineering and Technology, Vol 5,Issue 11,November 2018,ISSN 2394-7394.(Indexed in Google Scholar)
- A.Nirmala " **A Survey on Bluetooth Scatternet Scheduling Research Trends** " , International Journal of Computer Science and Mobile Computing, Vol. 3, Issue. 12, December 2014, pp.474-481, ISSN 2320-088X.
- A.Nirmala "**Segmentation of Medical Images Using Image Registration**", International Journal of Computer Science and Mobile Computing Vol. 3 Issue 9, September 2014,pp.496-501, ISSN:2320-088X
- A.Nirmala, "**Recognizing Pre And Post Surgery Faces Using Multi objective Evolutionary Firefly Algorithm**", International Journal of Emerging Technologies in Computational and Applied Sciences,pp.232-237, ISSN:2279-0047.
- A.Nirmala, **Network Delineate Safeguard for Surplus Control**, International Journal of Scientific and Research Publications, Vol. 3, Issue. 3, March 2013, pp:1-4, ISSN 2250-3153.

### Book Chapters

- Dr.A.Nirmala, "**AI within the Cloud: Changing Commerce and Development**", **Applied Computing in AI**, IOT Academy Publishers, Tamil Nadu, ISBN : 978-93-93622-68-6, Mar 2024,PP:102-111
- Dr.A.Nirmala, "**Blockchain Evolution Consensus Mechanisms and Security Concerns**", **Recent Trends in the Field of Computer**, Charulatha Publications, Tamil Nadu, ISBN : 978-93-5577-685-3, Dec 2023,PP:106-146
- Dr.A.Nirmala, Dr. R. Senthil Kumar, "**LoRaWAN for Smart Agriculturing**", **IOT, AI and Machine Learning** ,ESN Publications, Tamil Nadu , ISBN: 978-81-950423-5-7, First Edition, JAN 2021, PP: 97-104

- Dr.A.Nirmala, Dr.M.Savithri, “**Security Issues And Challenges In Internet Of Things (Iot)**” **IOT, AI and Machine Learning**, ESN Publications, Tamil Nadu , ISBN: 978-81-950423-5-7, First Edition, JAN 2021, PP: 105-108
- Dr.A.Nirmala, “**Medical Imaging**” ,**Modern Computer Science and Applications**, IOT Academy Publishers, Tamilnadu , ISBN: 97889393622150 First Edition, JUL 2022, PP: 38-43
- **Dr.A. Nirmala, “Deep Learning Techniques in Image Processing” ,Computer Science**, IOT Academy Publishers, Tamil Nadu , ISBN: 97889393622150 I Edition, NOV 2022, PP: 61-64

### Presentations in Conference

- **AI Empowerment Security**, Second International Conference on Recent Trends in Computer Science and Data Analytics, KPR College of Arts Science and Research, Coimbatore ,02-Feb-24.
- **An Implementation of Matlab Based System for Groundnut Leaf Disease Detection of Crop and Prediction Using Hybrid Machine Learning Techniques**, International Conference on computational Intelligence and Communication Technologies-2K24, Dr. N.G.P. Arts and Science College, Coimbatore, 04-Jan-24.
- **AI Algorithm for Breast Cancer Diagnosis and Treatment Planning: A Review**, **National Conference on Advanced Computing Sciences**, Dr.N.G.P. Arts and Science College, Coimbatore,16-Mar-23.
- **Classification of Ground Nut Crop Leaf Spot Disease Pictures Using A Deep Convolutional Neural Network**, National Conference on Advanced Computing Sciences, Dr.N.G.P. Arts and Science College on 16 -Mar-23.
- **Cap plant is a Paradigm for Classifying Groundnut Leaf Diseases Based on CNN with Capsule Neural Networks**, 2<sup>nd</sup> International Conference on Computing and Intelligent System, Sri Krishna Adithya College of Arts and Science College, 24-Jan-23 and 25 -Jan-23.
- **Applications of IoT in Agriculture**, A Two-Day International Conference on Machine Learning and Neural Information systems, Sri Vidya Mandir Arts & Science College, 18-Mar-21 and 19- Mar-21.
- **Vehicular Ad-Hoc Networks in Block Chain Cloud Computing**, National Conference on Emerging research trends in computer science and Technology SNMV College of Arts and Science College on 29-Jan-20.

- **Map Reduce Technique For Efficient Big Data Search Processing**, 2<sup>nd</sup> International Conference on Research trends in Computing Technologies, Dr.N.G.P. Arts and Science College on 28.-Feb-20&29-Feb-20.
- **Internet of Things**, 2<sup>nd</sup> International Conference on Research trends in Computing Technologies, Dr.N.G.P. Arts and Science College on 28-Feb-20&29=Feb-20.
- **Comparison of Image Quality Metrics**, 7th National Conference on Recent Trends and Advances in the Field of Information Technology, Karpagam Academy of Higher Education on 27-Sep-19.
- **A Detailed Analysis on Extreme Learning Machine for Classification of Brain Tumor Images**, National Conference on Emerging Research Trends in Computer Science and Technology, Department of Computer Science, SNMV College of Arts and Science, Coimbatore, 1-Feb-19.
- **Medical Image Denoising By Non-Local Means with Level Set based Fuzzy Segmentation**, International Conference on Computational Intelligence and Data Science, Department of Computer Studies, Sankara College of Science and Commerce, 10-Oct-18.
- **Map-Reduce Technique for Efficient Bigdata Search**, International Conference on Research Trends in Computing Technologies, Faculty of Computer Science, Dr.N.G.P. Arts and Science College,9-Aug-18 to 10-Aug-18.
- **Image Segmentation Using Seeded Region Growing Algorithm**, National Conference on Innovative Computational Techniques, PSG College of Arts &Science, Coimbatore.
- **Brain Tumor Segmentation and Detection Using Fuzzy Set**, National Conference on Emerging Trends in Bigdata Technologies and Research Issues, Dr.N.G.P. Arts and Science College, Coimbatore, 24- Feb-17.
- **A Fuzzy Rules-Based Method for Brain Tumor Segmentation and Detection**, National Conference on Emerging Trends in Computing and Communication, Karpagam University, Coimbatore on 17-Feb-17.
- **Color Image Segmentation for Fruit Ripeness Detection**, UGC sponsored National Conference on Information and communication Technologies for environmental sustainability, PSGR Krishnammal College for Women, 5Feb-16.

- **Application of Image Segmentation Method to Detection of Defects in Welding**, National Conference on merging computer Technology, Sri Ramakrishna Mission Vidyalyaya College of Arts and Science, Coimbatore, 22-Sep-15.
- **Color Image Segmentation Using Two Stage Otsu Method and Data Fusion Techniques**, National Seminar on “Recent Trends in Computing Techniques”, Department of Computer science & Applications, Arignar Anna College, Krishnagiri, 7- Feb-15.
- **Proper Relay Reduction and Route Breakage Prediction in Bluetooth Scatternet Scheduling**, National Conference on Wireless Communication, PSGR Krishnammal College for Women, 29- Jan-15.
- **Classification of Lung Cancer Using Image Processing**, National Conference, Sri Ramakrishna Mission Vidyalyaya College of Arts and Science, 23-Sep-14.
- **Weak Edges Detection on Low Contrast Images Using Image Segmentation**, National level Seminar at Periyar University College of Arts and Science, 12-Sep-14.
- **Pre and Post Surgery Faces Using Multi Objective Evolutionary Firefly Algorithm**, Second International Conference on Research Trends in Computer Technologies, at Dr.N.G.P Arts and Science College, 21- Feb- 14.
- **Pre and Post Surgery Faces Using Multi Objective Evolutionary Firefly Algorithm**, Second International Conference on Research Trends in Computer Technologies, Dr.N.G.P Arts and Science College, 30-Jan-14 and 31- Jan-14.
- **Inspection of Welding Images Using Segmentation Techniques**, 2nd International Conference on Competency Building Strategies in Business and Technology for Sustainable Development, Sri Ganesh School of Business Management ,2-Feb-13.
- **An Image Mapped Data Clustering Technique for Large Datasets**, National level Conference on Advanced Computing in Computer Applications, Sri Ramakrishna Engineering College, 24- Mar-12.
- **Effective Image Compression Using Wavelet Transform**, International Conference on Innovations in Digital World, PSGR Krishnammal College for Women, 3- Jan-12.
- **Achieving Academic Excellence through IQAC**, State level conference on Role of ICT in higher education, Dr.N.G.P Arts and Science College, 9-Dec-11 and 10-Dec-11.
- **Study on Image Segmentation Techniques**, State Level Conference on Modern computing Applications, Kovai Kalaimagal College of Arts and Science, 11-Feb-11.

- **Technique and Multicategory Cancer Classification**, National conference on Future Information Technology, RVS college of Arts and Science, 7-Oct-10.
- **Cryptography and Network Security**, National Level Conference on Advanced Trends in Information Technology, Dr.N.G.P Arts and Science College 3 -Mar- 10.

### Participation in Conference

- **National Conference on Multimedia Signal Processing and Networking**, Dr.N.G. P Institute of Technology, 30- Oct-10.
- **National Conference on Issues in Higher Education**, Association of Principals of Colleges, Bharathiar University & UGC, Academic Staff College,29-Oct-10.
- **National Conference on Emerging Education Models for 21<sup>st</sup> Century Learner**, Dr.N.G.P Arts and Science College, Coimbatore, 1-Aug-15.
- **Second International Conference on Research Trends in Computer Technologies**, Dr.N.G.P Arts and Science College, 30-Jan-14.

### Participation in Seminars

- **National Cyber Security Summit 24, Emerging Technologies and Trends in Cloud Security**, Sri Manakula Vinayagar Engineering College, Puducherry, 01 to 02-Mar-24.
- **Role of NAAC in Enhancing Quality in Higher Educational Institutions**, Sri Vidya Mandir Arts & Science College on 7<sup>th</sup> & 8<sup>th</sup> Sep-21.
- **Research Methodology in Computer Science and Engineering**, Sree Vasavi College of Arts and Science, Erode, 27-Feb-09 and 28-Feb-09.

### Participation in Workshop

- **One Day Workshop on Outcome Based Education (OBE)** organised by Dr. N.G.P Arts and Science College, Coimbatore in association with ipsr solutions limited on 04-Mar-23.
- **UGC-sponsored workshop on MOOCs, e-content Development and Open Educational Resources**, UGC-HRDC, Bharathiar University, 22-Oct-18 to 23-Oct-18.



- **Hands on Training on Latex Documentation Tool**, Department of Electronics and Communication Engineering, Sri Ramakrishna Engineering College, Coimbatore, 7-Sep-18 and 8-Sep-18.
- **Revised Assessment & Accreditation Framework of NAAC**, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, 27-Oct-18
- **NPTEL Workshop**, IIT Madras, PSG College of Arts & Science, Coimbatore, 22-Jun-18.
- **Mobile Application Development**, Department of Computer Applications at Dr.N.G.P Arts and Science College, 18-Dec-17 .
- **Medical Image Processing Using Matlab and Fiji: A Research Perspective**, Dr.N.G.P Institute of Technology, Coimbatore, 23- Sep-16 .
- **Image Processing Using MATLAB**, Department of Computer Science and Engineering, KPR Institute of Engineering and Technology, Coimbatore, 16- Sep-16 and 17-Sep-16.
- **Computer Vision and Image Processing Techniques**, Amrita Vishwa Vidyapeetham, Coimbatore, 15-Mar-13 to 16-Mar- 13.
- **Research Issues in Digital Image Processing**, Dr.N.G.P Arts and Science College Coimbatore, 25-Sep-12 and 26-Sep-12
- **Optimization Techniques for Image Processing**, Bharathiar University, 9 to 10-Mar-12.

#### **Participation in Orientation Programme / Short Term Courses**

- **Research Challenges & Security Issues in Wireless Networks**, (ISTE sponsored), Dr.N.G.P Institute of Technology, Coimbatore, 7-Dec 15 to 11-Dec- 2015.

#### **Participation in Faculty Development Programme**

- **Two weeks International Virtual Faculty Development Programme on “Innovative Research Opportunities and Applications of Data Science in The Industry 5.0 paradigm”** from 18-Aug-23 to 31-Aug-23, SRM Institute of Science and Technology, Ramapuram Campus.
- **6- Day International Virtual Faculty Development Programme on “Recent Trends on Research Methodologies, Tools and Techniques”** from 10-Jul--23 to 15-Jul-23, KG College of Arts and Science, Coimbatore.

- **Five Day Faculty Development Programme** on “Outcome Based Education” from 17-Jun-23 to 21-Jun-23, Dr.N.G.P. Arts and Science college, Coimbatore.
- **Professional Development Programme** on ‘Implementation of NEP-2020 for University and College Teachers’ from 18-Nov-18 to 26-Nov-22 and obtained 'A' Grade, Indira Gandhi National Open University Staff Training and Research Institute of Distance Education, New Delhi.
- **Online International Capacity Building Faculty Development Programme** on "Art of Research Paper Writing for Publications" on 13- Oct-22, Gobi Arts & Science College, Gobichettipalayam.
- Introduction to Internet of Things, NPTEL –AICTE, Jul-Oct -19.
- **NAAC Revised Accreditation Frame Work and OBE Assessment Methodology**, Faculty Development Cell & IQAC, Dr.N.G.P. Arts and Science College, Coimbatore during May 27-02-Jun-19.
- **Quality Measures in Higher Education**, Faculty of Computer Cell, Dr.N.G.P. Arts and Science College, Coimbatore, 3-Dec-18 to 9-Dec-18.
- **AICTE Approved Faculty Development Programme (Fdp101x) on Foundation Program in ICT for Education**, Indian Institute of Technology Bombay ,3-Aug-17 to 7-Sep-17.
- **AICTE approved Faculty Development Programme (FDP201x) on Pedagogy** for Online and Blended Teaching-Learning Process, Indian Institute of Technology Bombay ,14-Sep-17 to 12-Oct-17.
- **National Level Faculty Development Programme**, Kongunadu Arts and Science College, Coimbatore ,27-Sep-14.
- **Web 3.0 Technologies**, Dr.N.G.P Institute of Technology, Coimbatore.
- **Enterprise Resource Planning Using SAP B1**, Dr.N.G.P Business School, Dr.N.G.P Institute of Technology, Coimbatore , 31- Jul -10.

### Participation in Webinar

- **Augmented Reality and Extended Reality**, PSG College of Technology, Coimbatore on 29.05.2020.
- **One-week FDP Programme** on Quality Initiatives in Higher Education, organized by Consortium of Colleges through Online (Google Meet) from 13-Apr-20 to 20-Apr-20.

- **One-week FDP Programme on PYTHON 3.4.3**, organized by Pimpri Chinchwad College of Engineering & Research, Department of Computer Engineering in association with Spoken Tutorial Project, IIT Bombay from 20-Apr-20 to 25-Apr-20.
- **Author Academy, Be Scientist** organized by Nature Research Academies from 7-Dec-20 to 9-Dec-20.
- **One-week online FDP** on Boss Linux-Ubuntu Operating System organized by Karmaveer Bhaurao Patil College of Engineering, Satara, Spoken Tutorial IIT, Bombay & Department of Computer Science & Engineering from 15-Apr-20 to 21-Apr-20.
- **Demonstration cum hands on exposure in Java** organised by Spoken Tutorial Project, IIT Bombay from 05-Apr-20 to 13-Apr-20 remotely at Zeal College of Engineering and Research, Pune.
- **Online webinar** on “Challenges and Opportunities in Startup and Innovation” organized by the Department of Electrical and Electronics Engineering of Mahendra Institute of Technology on 14-Jul-20.

#### Conference / Seminar / Workshop Organized

- Organizing Member, National Seminar on Integration of Traditional Knowledge system into Modern Higher Education: NEP Perspective, sponsored by ICSSR, Dr.N.G.P Arts and Science College, Coimbatore, 4-Jul-2024 and 5-Jul-24.
- Organizing Secretary, National Seminar on IoT Cyber Security: Challenges and Solutions for Social and Real-Life Application, sponsored by ICSSR, Department of Computer Science with Cognitive Systems, Dr.N.G.P Arts and Science College, Coimbatore, 05-Jan-24.
- Organizer, International Conference on Computational Intelligence and Communication Technologies (ICCICT 24), organized by Faculty of Computer Science, Dr. N.G.P. Arts and Science College, Coimbatore, 04-Jan-24.
- Convener, DST - SERB Sponsored National Seminar on Ai Solutions for Farmer Safety and Security in India, Department of Computer Science with Cognitive Systems, Dr.N.G.P Arts and Science College, Coimbatore, 21-Jul-23.
- Reviewer, International Conference on Artificial Intelligence, Communication, IoT, Data Engineering and Security (IACIDS 2023), Department of Data Science, Christ, Pune Lavasa Campus 23-Nov-23 to 25-Nov-23.

- Convener, DHR-ICMR Sponsored One Day National Level Workshop on Advanced Artificial Intelligence (AI) Methods in Breast Cancer Diagnosis and Clinical Research, Department of Computer Science with Cognitive Systems, Dr. N.G.P. Arts and Science College, Coimbatore, 26-Nov-22.
- Organizing Secretary, National level Conference on Computer Applications in Service Sector: Models and Methods, Dr. N.G.P. Arts and Science College, Coimbatore, 7- Sep-12.

### Membership in Professional Bodies

Name of the Professional Body	Nature of membership	Duration
IAENG	Life-time	-

### Awards /Honors

Awards / Honors	Agency / Institute	Year
Maximum Authors Contributing For A Book on COVID 19 And Its Impact	ESN Publication	2021
Best Mentor	Dr.N.G.P. Arts and Science College	2021

### Indexing and Citations

Google Scholar Citations: 13

h-index: 2