Dr. J. Arun Nehru

Contact Information		
Assistant Professor (Sr.G) Department of Computer Science and Engineering, Faculty of Engineering and Technology, SRM Institute of Science and Technology, Vadapalani Campus, No. 1, Jawaharlal Nehru Road, Vadapalani, Chennai – 600 093, Tamil Nadu, India.	***Mobile***	(+91) 7010727200 (+91) 9629427700
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CAREER PROFILE

Objective
To pursue a challenging career and be part of a progressive organization that gives scope to enhance my knowledge, skills and to reach the pinnacle in the field of computer vision research with sheer determination, dedication and hard work.

ACADEMICS

Exam	Institute	Board	Year of Study	Percentage
PhD (Computer Science & Engg.)	Annamalai University, Annamalai Nagar.	Annamalai University	2012 - 2017	**Awarded**
M.E. (Computer Science & Engg.)	Annamalai University, Annamalai Nagar.	Annamalai University	2008 - 2010	**8.42 * (First Class with Distinction)**
B.E (Computer Science & Engg.)	Annamalai University, Annamalai Nagar.	Annamalai University	2004 - 2008	**8.10 * (First Class)**
Diploma in Computer Technology	Muthiah Polytechnic, Annamalai Nagar.	Directorate of Technical Education (DOTE)	2001 - 2004	**83% (First Class with Honours)**
SSLC	R C T Higher Secondary School, Chidambaram.	Tamilnadu State Board	2000 - 2001	**70.6% (First Class)**

* **OGPA** – Overall Grade Point Average, Out of 10

TECHNICAL SKILLS

Operating Systems	DOS, Window XP, Vista, Windows 7 & 8, Linux and Ubuntu 12.04 LTS
Languages	C, C++, Java, Python
Developer Applications	Visual Studio 2015, MATLAB 2018 & 2019, Qt (GUI) Designer
Computer Vision Libraries	OpenCV, OpenGL, VLFEAT
Machine Learning Tools	SVMTorch, LIBSVM, HTK Tool Kit, WEKA
Multimedia Applications	Photoshop CS3, Pagemaker 7.0, Sound Forge, Adobe Premier, Swish Max, XnView
Office Package	Microsoft Word, Microsoft Excel, Microsoft Access and Microsoft PowerPoint.
Documentation Tool	LaTex (TeXnicCenter, ShareLaTex, TexLive, Overleaf)
Hardware	PC Assembling, Installation of Windows/Linux OS and Installation of Virtual Machines
Networking	LAN Configuring, Troubleshooting and Group Policy Settings.
Technology	Virtualization, Cloud Computing and Internet of Things
Subjects	Computer Architecture, Computer Graphics, System Software, Operating System, Artificial Intelligence and Expert System and Software Engineering

TEACHING EXPERIENCE

Institution/University	Designation	Period
IFET College of Engineering, Villupuram – 605108. Tamil Nadu, INDIA	***Lecturer*** in Department of Computer Science and Engineering	7th June 2010 to 09th May 2012. (**2 Years**)
SRM Institute of Science and Technology, (Vadapalani Campus), Chennai, Tamilnadu, INDIA	***Assistant Professor*** in Department of Computer Science and Engineering	07th July 2017 to Till Date

MAJOR RESEARCH PROJECT

Designation	**Project Fellow**
Title	Intelligent Suspicious Activity Detection in Real-Time Video for Surveillance Applications
Principal Investigator	Dr. M. Kalaiselvi Geetha

Funding Agency	University Grant Commission (UGC), New Delhi
Funding Amount	13.08 Lakhs
Duration	2012 – 2015 (3 Years)

RESEARCH EXPERIENCE

PhD (Full-Time)	Department of Computer Science and Engineering, Faculty of Engineering and Technology, Annamalai University, Annamalai Nagar from November 2012 to June 2017 date. **(5 Years)**
Research Methodology Papers	1. Image and video processing. 2. Pattern Classification and Techniques.
Research Interests	Computer Vision, Image/Video Processing, Intelligent Video Surveillance, Pattern Recognition and Classification and Machine Learning

INTERNATIONAL PUBLICATIONS

1. **J. Arunnehru** and M. Kalaiselvi Geetha, "A Quantitative Real-Time Analysis of Object Tracking Algorithm for Surveillance Applications", *International Journal of Emerging Technology and Advanced Engineering (IJETAE)*, ISSN: 2250-2459, vol. 3(1), pp. 234-240, 2013.
2. **J. Arunnehru** and M. Kalaiselvi Geetha, "Automatic Activity Recognition for Video Surveillance", *International Journal of Computer Applications (IJCA)*, ISSN: 0975-8887, vol. 75(9), pp. 1-6, 2013.
3. **J. Arunnehru** and M. Kalaiselvi Geetha, "Motion Intensity Code for Action Recognition in Video Using PCA and SVM", *Lecture Notes in Computer Science (LNCS),* ***Springer***, ISSN: 0302-9743, vol. 8284, pp. 70-81, 2013.
4. K. Saranya, M. Kalaiselvi Geetha and **J. Arunnehru**, "Motion Detection and Tracking of Multiple Objects for Intelligent Surveillance", *IOSR Journal of Computer Engineering (IOSR-JCE)*, ISSN: 2278-8727, vol. 1, pp. 49-55, 2014.
5. S. Kiruthiga, M. Kalaiselvi Geetha and **J. Arunnehru**, "Visual Words for Human Activity Recognition in Surveillance Video", *IOSR Journal of Computer Engineering (IOSR-JCE)*, ISSN: 2278-8727, vol. 2, pp. 37-43, 2014.
6. **J. Arunnehru** and M. Kalaiselvi Geetha, "An Efficient Multi-view Based Activity Recognition System for Video Surveillance Using Random Forest", *Smart Innovation, Systems and Technologies,* ***Springer***, ISSN: 2190-3018, vol. 32, pp. 111-122, 2014.
7. S. Kiruthiga, M. Kalaiselvi Geetha and **J. Arunnehru**, "Efficient Codebook for Human Activity Recognition in Surveillance Video", *International Journal for Advance Research in Engineering and Technology (IJARET)*, ISSN: 2320-6802, pp. 137-141, 2014.
8. K. Saranya, M. Kalaiselvi Geetha and **J. Arunnehru**, "Multiple Objects Tracking for Intelligent Surveillance", *International Journal for Advance Research in Engineering and Technology (IJARET)*, ISSN: 2320-6802, pp. 74-79, 2014.
9. **J. Arunnehru** and M. Kalaiselvi Geetha, "Human Activity Recognition Based on Projected Histogram Features in Surveillance Videos using Tree Based Classifiers", *International Journal of Applied Engineering Research (IJAER)*, ISSN: 0973-4562, vol. 9(21), pp. 4950-4954, 2014.

10. T. Nanthini, M. Kalaiselvi Geetha and **J. Arunnehru**, “Occlusion Handling Based on Fractal Texture Analysis in Surveillance Video using Neural Network Classifier”, *International Journal of Applied Engineering Research (IJAER)*, ISSN: 0973-4562, vol. 9(20), 2014.
11. **J. Arunnehru** and M. Kalaiselvi Geetha, “Maximum Intensity Block Code for Action Recognition in Video Using Tree-based Classifiers”, *Advances in Intelligent Systems and Computing (AISC),* ***Springer***, ISSN: 2194-5357, vol. 325, pp. 715-722, 2015.
12. **J. Arunnehru**, M. Kalaiselvi Geetha and T. Nanthini, “Occlusion Detection Based on Fractal Texture Analysis in Surveillance Videos Using Tree-Based Classifiers”, Communications *in Computer and Information Science (CCIS),* ***Springer***, ISSN: 1865-0929, vol. 536, pp. 307-316, 2015.
13. **J. Arunnehru** and M. Kalaiselvi Geetha, “Human Activity Recognition Based on Motion Projection Profile Features in Surveillance Videos Using Support Vector Machines and Gaussian Mixture Models”, *Communications in Computer and Information Science (CCIS),* ***Springer***, ISSN: 1865--0929, vol. 536, pp. 412-423, 2015.
14. **J. Arunnehru** and M. Kalaiselvi Geetha, “Vision-Based Human Action Recognition in Surveillance Videos using Motion Projection Profile Features”, *Lecture Notes in Computer Science (LNCS),* ***Springer***, ISSN: 0302-9743, vol. 9468, pp. 307-316, 2016.
15. S. Gowsalya, M. Kalaiselvi Geetha and **J. Arun Nehru**, “CMI-HoG for Human Emotion Recognition in Video using Tree based Classifiers”, *International Journal of Control Theory and Applications*, ISSN: 0974-5572, vol. 9(3), pp. 1535-1543, 2016.
16. **J. Arunnehru** and M. Kalaiselvi Geetha, “Automated Complex Activity Recognition in Multiple Person Interaction”, *Journal of Imaging and Robotics,* ***CESER*** *Publication (JIR),* ISSN: 2231-525X, vol. 16(3), pp. 71-85, 2016.
17. **J. Arunnehru** and M. Kalaiselvi Geetha, “Difference Intensity Distance Group Pattern for Recognizing Actions in Video using SVM”, *Journal of Pattern Recognition and Image Analysis,* **Springer**, ISSN: 1054-6618, Vol. 26(4), pp. 688–696, 2016.
18. R. Santhoshkumar, M. Kalaiselvi Geetha, **J. Arunnehru**, "SVM – KNN based Emotion Recognition of Human in Video using HOG Feature and KLT Tracking Algorithm", International Journal of Pure and Applied Mathematics, Vol. 117(15), pp. 621-634, 2017.
19. R. Santhoshkumar, M. Kalaiselvi Geetha, **J. Arunnehru**, "Activity Based Human Emotion Recognition in video", International Journal of Pure and Applied Mathematics, Vol. 117(15), pp. 1185-1194, 2017.
20. **J. Arunnehru**, A. Yashwanth, and Shaik Shammer. "Canonical Correlation-Based Feature Fusion Approach for Scene Classification." Intelligent Systems Design and Applications, pp. 134-143. **Springer**, Cham, 2017.
21. B. S. Vidhyasagar, S. Aravinda Krishnan, D. Manikkannan, **J.Arunnehru** “An Implementation and Performance Monitoring of Virtual Machines using Ganglia in Eucalyptus Private Cloud.”, International Journal on Computer Science and Engineering (IJCSE), 9(10), pp.606-611, 2017.
22. **J. Arunnehru**, C Sabarinathan, R N Naresh, M Shreeram and R Vaidyanathan. “Detection of Hazardous Gas Composition in Sewer Pipeline and to Identifying Safe Working Condition in Sewer Pipelines”. International Journal of Computer Applications, 180(40), pp.1-6, May 2018.
23. Vidhyasagar B S, Ajithkumar M, Shaik Sajid, Syed Khadeer, Rahul P, **J . Arunnehru**, “Cost Effective PSO Model for MapReduce in Cloud Environment”, International Journal of Computer Sciences and Engineering, Vol. 6(4), pp. 497--501, 2018.
24. **J. Arunnehru,** G. Chamundeeswari, and S. Prasanna Bharathi. "Human Action Recognition using 3D Convolutional Neural Networks with 3D Motion Cuboids in Surveillance Videos." Procedia Computer Science, **Elsevier**, 133, pp. 471-477, 2018.

25. Sridhar, Shruthi Hiranmayi, and **J. Arunnehru**. "Traffic Engineering: An Application of MPLS L3 VPN Technology." 2018 2nd International Conference on Trends in Electronics and Informatics (ICOEI). **IEEE**, 2018.

26. Ajay Kumar, **J. Arunnehru**, and Shweta Sinha, “Effective Testing Methodology Using Bi-Directional Symbolic Analysis”, International Journal of Pure and Applied Mathematics, Volume 119 (13), pp.261-269, 2018,

27. **J. Arunnehru**, H. Anwar Basha, Ajay Kumar, R. Sathya, and M. Kalaiselvi Geetha. "A Vision-Based On-road Vehicle Light Detection System Using Support Vector Machines." In Integrated Intelligent Computing, Communication and Security, **Springer**, Singapore, pp. 117-126. 2019.

28. R. Rajkumar and **J. Arunnehru**. "A Study on Convolutional Neural Networks with Active Video Tubelets for Object Detection and Classification." In Soft Computing and Signal Processing, **Springer**, Singapore, pp. 107-115, 2019.

29. Jatin Katyal, Poonkodi Mariappan, **J. Arunnehru**, "Modular Face Recognition: A Customizable System", International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277-3878, Vol. 7(6S3), April, 2019.

30. BS Vidhyasagar, J Rajapaulperinbam, M Krishnamurthy, **J. Arunnehru,** "An Effective Resource Management in Hadoop Cluster using Optimized Algorithm", International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277-3878, Vol. 8(1), May 2019.

31. A. Jothimani, Parimi Prasanth, Shradha Anil, **J. Arunnehru**, "Facial Expression for Emotion Detection using Deep Neural Networks", International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277-3878, Vol. 8(1S2), May 2019.

32. S. Thalapathiraj, B. Baskaran, and **J. Arunnehru**, "Novel approach for texture feature extraction and classification of satellite images using Modified Hilbert Matrix”, **AIP** Conference Proceedings, Jun 2019.

33. Junaid Ahmad, Bhanu Bhaskar, Haresh Seetharaman, Ajay Kumar, **J. Arunnehru**, "3DMSNET: 3D CNN Based Brain MRI Segmentation", International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277-3878, Vol. 8(5S3), July 2019.

34. AnwarBasha, H., S. SasiKumar, D. Dhanasekaran, and **J. Arunnehru**. "A Proficient Remote Information Responsibility Check Protocol in Multi-Cloud Environment." Evolutionary Intelligence, **Springer**, pp. 1-15, 2019.

35. **Arunnehru, J**., Kumar, A. and Verma, J.P. "Early Prediction of Brain Tumor Classification Using Convolution Neural Networks". In Communications in Computer and Information Science (CCIS), **Springer**, Singapore, pp. 16-25, Dec 2019.

36. **Arunnehru, J**., B. S. Vidhyasagar, and H. Anwar Basha. "Plant Leaf Diseases Recognition Using Convolutional Neural Network and Transfer Learning." In Lecture Notes in Electrical Engineering (LNEE), **Springer**, Singapore, pp. 221-229, 2020.

37. **Arunnehru, J**., AK Nandhana Davi, R. Raghul Sharan, and Poornima G. Nambiar. "Human Pose Estimation and Activity Classification Using Machine Learning Approach." In Advances in Intelligent Systems and Computing (AISC), **Springer**, Singapore, pp. 113-123, 2019.

38. Vidhyasagar, B. S., J. Raja Paul Perinbam, M. Krishnamurthy, and **J. Arunnehru**. "A Cost-Effective Data Node Management Scheme for Hadoop Clusters in Cloud Environment." In Communications in Computer and Information Science (CCIS), **Springer**, Singapore, pp. 27-37, 2019.

39. Anwar Basha.H, **Arunnehru. J**, Sathya. R, Meenakshi. "Multi Keyword Ranked based Search for Secured Cloud Data using Vector Space Model", Journal of TEST Engineering & Management, Vol. 83, April 2020.

40. R.Sathya, E.Elamathi , C.Thamizhdevi , **J.Arunnehru**, G.Revathy. "Human Fingerprint Recognition System (HFRS) For Real-Time Application Using Support Vector Machine (SVM) ", International Journal of Advanced Science and Technology,Vol. 29(6), July 2020.

41. Balaji S, Suthantira S, Nikhilesh Amarnath, and **J. Arunnehru**. “Computer-Assisted All (Acute Lymphoblastic Leukemia), AML (Acute Myeloid Leukemia) Detection and Counting for Diagnosis of Blood Cancer”, International Journal of Scientific Research in Engineering and Management (IJSREM), Vol. 4(4), 2020.
42. Ajay Samuel. A, Dhiwakar. J, Arkesh. J, and **J. Arunnehru**, An Efficient Approach for Multi-Modal Brain Tumor Classification using Texture Features and Machine Learning, International Research Journal of Engineering and Technology (IRJET), Vol. 7(3), 2020.
43. Bala Sai Mani Kanta, Gaganpal Singh, Rounak Mitra, and **J.Arunnehru**, Facial Expression Recognition using Attentional Convolutional Network, International Research Journal of Engineering and Technology (IRJET), Vol. 7(5), 2020.

BOOK CHAPTER

1. M. Kalaiselvi Geetha, **J. Arunnehru**, A. Geetha, “Early Recognition of Suspicious Activity for Crime Prevention”, *Emerging Technologies in Intelligent Applications for Image and Video Processing*, **IGI Global Publisher**, USA: IGI Global Publisher, ISBN13: 9781466696853, pp. 209-236. Jan 2016. DOI: 10.4018/978-1-4666-9685-3.
2. **J. Arunnehru**, M. Kalaiselvi Geetha, “Automatic Human Emotion Recognition in Surveillance Video”, *Intelligent Techniques in Signal Processing for Multimedia Security*, Springer Verlag, USA: **Springer** Verlag, ISBN 978-3-319-44790-2, pp. 321-342. Oct 2017. Link: springer.com/chapter/10.1007%2F978-3-319-44790-2_15.
3. **J. Arunnehru**, M. Kalaiselvi Geetha, “Internet of Things Based Intelligent Elderly Care System”, *Internet of Things: Novel Advances and Envisioned Applications*, Springer-Verlag, Switzerland: **Springer**-Verlag, ISBN 10: 331953470X ISBN 13: 9783319534701, pp. 207-229. Apr 2017, Link: springer.com/chapter/10.1007/978-3-319-53472-5_10.

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INTERNATIONAL CONFERENCES

1. **J. Arunnehru**. “A Quantitative Real-Time Analysis of Object Tracking Algorithm for Surveillance Applications”, *International Conference on Information, Systems and Computing (ICISC’13), Sri Sai Ram Engineering College*, January 4--5, 2013, West Tambaram, Chennai, India.
2. **J. Arunnehru**. “Behavior recognition in surveillance video using temporal features”, *Fourth International Conference on Computing, Communications and Networking Technologies (ICCCNT), **IEEE***, pp. 1--5, July 4--6, 2013, Tiruchengode, India.
3. **J. Arunnehru**. “Motion Intensity Code for Action Recognition in Video using PCA and SVM”, *International Conference on Mining Intelligence and Knowledge Exploration (MIKE’13), Virudhunagar Hindu Nadar’s Senthikumara Nadar College,* Virudhunagar, Tamilnadu, India, Dec 18--20, 2013.
4. **J. Arunnehru**. “Maximum Intensity Block Code for Action Recognition in Video using Tree Baased Classifiers”, *Springer International Conference on Artificial Intelligence and Evolutionary Algorithms in Engineering Systems (ICAEES’14),* Noorul Islam Centre for Higher Education, Noorul Islam University, Kumaracoil, Kanyakumari, Tamilnadu, India, April 22 & 23, 2014.
5. **J. Arunnehru**, “Codebook Generation for Action Classification in Vision based Surveillance”, *Eighth International Conference on Image and Signal Processing (ICISP-2014), **Elsevier***, pp. 230--237, July 25--27, 2014, Bangalore, India.
6. **J. Arunnehru**, “Maximum Motion Representation and Recognizing Activity in Surveillance Video”, *Second International Conference on Emerging Research in Computing, Information,*

Communication and Applications - ERCICA- 2014, ***Elsevier***, pp. 521-- 527, August 1--2, 2014, Bangalore, India.

7. **J. Arunnehru**, "Occlusion Detection Based on Fractal Texture Analysis in Surveillance Videos using Tree-based Classifiers", *Third International Symposium on Security in Computing and Communications (SSCC'15)*, SCMS School of Engineering & Technology, August 10--13, 2014, Kochi, Kerala, India.
8. **J. Arunnehru** and M. Kalaiselvi Geetha, "Human Activity Recognition based on Motion Projection Profile Features in Surveillance videos using SVM and GMM", *Third International Symposium on Security in Computing and Communications (SSCC'15)*, SCMS School of Engineering & Technology, August 10--13, 2014, Kochi, Kerala, India.

SEMINAR & WORKSHOPS

94th Indian Science Congress (International Conference)	From Jan 3rd to 7th 2007 held at Annamalai University, Annamalai Nagar, Tamilnadu. Membership No. STM142
UGC Sponsored National Workshop on Grid and Cloud Computing	On Feb 12th and 13th 2010 organized by Department of CSE, FEAT, Annamalai University, Annamalai Nagar, Tamilnadu.
National Workshop on Cloud Computing	On May 21st 2011 organized by C-DAC, Knowledge Park, Bangalore.
National Workshop on LaTex	On Sep 1st and 2nd 2012 organized by Department of CSE, FEAT, Annamalai University, Annamalai Nagar, Tamilnadu.
National Workshop on Pattern Classification Techniques	On Sep 28th 2013 organized by Department of CSE, FEAT, Annamalai University, Annamalai Nagar, Tamilnadu.
National Workshop on Research Directions in Speech and Image Processing	On Oct 5th 2013 organized by Department of CSE, FEAT, Annamalai University, Annamalai Nagar, Tamilnadu.
UGC Sponsored Workshop on Research Methodology	From Jan 6th – 9th 2015 organized by Department of Economics and Research and Development Cell, Annamalai University, Annamalai Nagar, Tamilnadu.
Workshop on User Awareness program on SHODHGANGA: A Repository on Indian Thesis and Dissertations	On Feb 12th 2015 organized by Department of Library and Information Science, Annamalai University, Annamalai Nagar, Tamilnadu.
National Workshop on Cyber Security & Cryptographic Tools	On June 29th and 30th 2016 organized by Department of Computer Science and Engineering, GKM college of Engineering and Technology, Perungalathur, Chennai.

FACULTY ENABLEMENT PROGRAM

"Campus Connect" – Faculty Enablement Program (FEP)	From July 4th to 8th 2011 held at Infosys Development Centre, Infosys Limited, Chennai.

MEMBERSHIP PARTICULAR

Indian Society of Technical Education (ISTE)	Life Member, LM78036
International Association of Engineers (IAENG)	Life Member: 134028
The Institution of Engineering and Technology (IET)	Annual Member: 1100664483
International Economics Development Research Center (IEDRC)	Life Member: 90081089
The Indian Science Congress Association (ISCA)	Annual Member: A5956

PERSONAL DETAILS

Name	**J. ARUN NEHRU**
Sex	Male
Date of Birth	07/05/1986
Father's Name	S. Jawaharlal Nehru
Marital Status	Married
Nationality	Indian
Language Known	Tamil and English

DECLARATION

I hereby declare that the information stated above are true and correct to the best of my knowledge and belief.

Place: Chennai **yours truly**,

Date:

(J.ARUNNEHRU)