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| **Dr.K.P.SANAL KUMAR****Assistant Professor,****P.G.Departmentof Computer Science,****R.V.Government College,****Chengalpattu – 603 001.Tamil Nadu, India****Email:drkpsanalkumar@rvgartscollege.in****sanalprabha@yahoo.co.in****(m) 91-9444796826** | **C:\Users\SANAL\Desktop\CV_Dr.K.P.SANALKUMAR\Dr.K.P.SanalKumarProfilePic.jpg** |

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**Educational Qualifications: MCA., M.Tech(CSE).,M.Phil(CS).,Ph.D(CSE)**

**Biography:**

Dr. K. P. Sanal Kumar received the M.C.A., degree from M.S.University,Tirunelveli, India in 2000. He received the M.Tech degree in Computer Science and Engineering from Bharath University, Chennai, India in the year 2005. He received the M.Phil degree in Computer Science from M.S University, Tirunelveli, India in the year 2008. He received his Ph.D in Computer Science and Engineering from Annamalai University, Chidambaram, India in 2019. He has been with Annamalai University, Since 2008. Currently he is working as Assistant Professor in the P.G. Department of Computer science at R.V. Government College, Chengalpattu, Tamilnadu, India (on Deputation). He has published 40 papers in international journals and conferences. He has authored *Eight Text books including* ***IOT Security, Block Chain Unleashed, Python Using OOPS for Beginners, Role or Impact of Artificial Intelligence in sustainable smart cities and Urban Mobilities, Fundamentals and advanced Guide to ML and Complex Network, Advanced Java Programming (In Press), Swarm Intelligence and Optimization (In Press) and Artificial Intelligence Inspired with Machine Learning and Data Science for Beginners (In Press).*** He is a life member of CSI, ISTE, IAENG, IISTEM, IIER and Professional Member of IFERP. He is serving as a member of Editorial and Reviewer Boards in many National and International Journals including Elsevier, Springer etc. His research interest includes Image Processing, Soft Computing, Data Mining, Pattern Recognition, Machine Learning, Deep Learning and Wearable Computing etc.

**Total years of Experience in Teaching:** 19 years

**Ph.D. Recognized Guide: Annamalai University Guideship No: 14418. On Going Research Projects - 4**

**Membership in professional bodies:** LMCSI, LMISTE, LMIAENG, IISTEM, IFERP, IIER

**GoogleScholar ID:**<https://scholar.google.com/citations?user=_K3RYJ4AAAAJ&hl=en&authuser=1>

**Research Gate ID:** <https://www.researchgate.net/profile/K_P_Kumar>

**ORCHID ID:** <https://orcid.org/0000-0002-4047-197X>

**Scopus ID:**<https://www.scopus.com/authid/detail.uri?authorId=57195554958>

**Awards and Achievements**

1. **Best Faculty Award 2021-**Manamuna Foundation and Softech Chennai
2. **Selected as - Bentham Science Ambassador for ASIA / INDIA (World’s Leading Text Books and Journals Publisher) during the Year 2022 – 2023**

**Text Books Published - International**

1. **IOT SECURITY – PANDIT Publications – ISBN 978-93-93769-07-7**
2. **Block Chain Unleashed - PANDIT Publications - ISBN 978-93-93769-08-4**
3. **Fundamentals and Advanced Guide to Machine Learning and Complex Network – Scientific International Publishing House (SIPH ) ISBN : 978-93-94002-66-1**
4. **Python using OOPS for Beginners – Scientific International Publishing House (SIPH ) ISBN : 978-93-5625-000-0**
5. **Role / Impact of Artificial Intelligence in Sustainable Smart Cities and Urban Mobilities – Scientific International Publishing House (SIPH ) - ISBN: 978-93-5625-089-5**
6. **Advanced Java Programming- Scientific International Publishing House (SIPH ) - ISBN: 978-93-5625-143-4 ( In Press)**
7. **Swarm Intelligence and Optimization - PANDIT Publications – ISBN 978-93-93769-22-0 (In Press)**
8. **Artificial Intelligence Inspired with ML and Data Science for Beginners – PANDIT Publications – In Press**

**INDIAN PATENT PUBLISHED:**

* Internet of Things (IOT) based intelligent water quality monitoring and Distribution Management system.(2020)

<http://ipindia.nic.in/writereaddata/Portal/IPOJournal/1_4840_1/Part-1.pdf>

* IOT based Smart Air Conditioner Controller for Clean Room.(2021)

<https://ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4959_1/Part-1.pdf>

**Distinguished Speaker/ Invited Speaker (Foreign Countries)**

1. ROBOT FORUM 2023 **Las Vegas, USA** on March 13-15 ,2023.

**Title of the Speech**: Classification of Alzheimer disease using Machine Learning Techniques

1. 7th Annual Global Congress of Knowledge Economy , January 9-11 ,2023**Sapporo Japan,**

**Title of the Speech:** AI in Education and HealthCare.

**Editorial Board member:**

1. Editor- Member of (LSP) Lattice Science Publisher.
2. International Engineering Journal for Research & Development (IEJRD)
3. Smart Construction Research –Whioce Publications Singapore (SCR)
4. ICIPPS -2020 Editorial Member
5. Glacier Journal of Scientific Research (GJSR)
6. International Journal of Innovative Research in Computer and Communication Engineering (IJIRCCE)
7. International Journal of Innovative Research in Science Engineering and Technology (IJIRSET)
8. International Journal of Intelligent Computing and Technology (IJICT) –YGMRO
9. Mathematics and Computer Science (MCS)- Science Publishing Group-NY- USA
10. International Journal of Engineering Development and Research(IJEDR)
11. European Journal of Engineering Science and Technology (EJEST)

**Reviewer Board Member:**

1. Artificial Intelligence Review(AI) – Springer Nature
2. Journal of Super Computing – Springer
3. Journal of Soft Computing- Springer
4. Signal Image and Video Processing - Springer
5. Journal of Computers and Electrical Engineering – Elsevier
6. Journal of Ambient Intelligence and Humanized Computing - Springer
7. Journal of Information Security and Applications(JISA)– Elsevier
8. International Journal of Control, Automation and Systems (IJCAS)- Springer Nature
9. Advances in Science ,Technology and Engineering Systems Journal (ASTESJ)
10. American Journal of Applied Sciences(AJAS)-Science Publications-UAE
11. Institute of Scholars (InSc) –INDIA
12. International Journal of Innovations in Engineering Research and Technology (IJIERT)- NOVATEUR publication
13. International Journal of Computers & Technology (IJCT) –KHALSA Publications
14. Journal of Emerging Technologies and Innovative Research (JETIR) –IJ Publications
15. International Journal of Research and Analytical Reviews(IJRAR) – ATMAN Publication Academy
16. International Journal of Creative Research Thoughts(IJCRT)
17. International Journal of Engineering and Advanced Technology – IJEAT

Blue Eyes Intelligence Engineering and Sciences publications(vi to xv) INDIA

1. International Journal of Soft Computing and Engineering- IJSCE
2. International Journal of Recent Technology and Engineering – IJRTE
3. International Journal of Innovative Technology and Exploring Engineering –IJITEE
4. International Journal of Innovative Science and Modern Engineering-IJISME
5. International Journal of Inventive Engineering and Sciences-IJIES
6. International Journal of Emerging Science and Engineering –IJESE
7. International Journal of Advanced Engineering and NanoTechnology-IJAENT
8. International Journal of Basic Sciences and Applied Computing-IJBSAC
9. International Journal of Management and Humanities –IJMH
10. Journal of Computer and Education Research
11. Eurasian Journal of Science Engineering and Technology
12. Balkan Journal of Electrical and Computer Engineering
13. International Journal of Engineering and Innovative Research
14. Journal of Intelligent Transportation Systems and Applications
15. Eskisehir Technical University Journal of Science and Technology A- Applied Sciences and Engineering
16. International Advanced Researches and Engineering Journal
17. 2nd International virtual Conference on Multidisciplinary Research (IVCMR-2020) November 2020- California -USA.

**International Conference Organized/ Organizing Committee Member / Co Ordinated**

1. **Webinar on ANDROID APP DEVELOPMENT, R V Government Arts College, 11 th June 2020.**
2. 4TH INTERNATIONAL NEW YORK ACADEMIC RESEARCH CONGRESS ,**January 15-16, 2022.(Virtual)**
3. 4TH INTERNATIONAL CONGRESS ON LIFE, SOCIAL, AND HEALTH SCIENCES IN A CHANGING WORLD" , **February 12-13, 2022(Virtual)**
4. 8th International Istanbul Scientific Research Congress, which will be held online via ZOOM on **March 12-13 2022.(Virtual)**
5. 5TH INTERNATIONAL CONGRESS ON LIFE, SOCIAL, AND HEALTH SCIENCES IN A CHANGING WORLD" , **March 26-27, 2022. (Virtual)**
6. 5TH INTERNATIONAL NEW YORK ACADEMIC RESEARCH CONGRESS ,**April 23- 24** **, 2022 (Virtual)**
7. 4th INTERNATIONAL CAPITAL SCIENCE, SOCIAL AND HEALTH SCIENCES CONGRESS**, 26-27 FEBRUARY 2022**
8. 4TH INTERNATIONAL "BAŞKENT" CONGRESS ON PHYSICAL, SOCIAL AND HEALTH SCIENCES FEBRUARY 26-27, 2022 – TURKEY
9. 9th INTERNATIONAL ISTANBUL SCIENTIFIC RESEARCH CONGRESS**, 14-15 MAY 2022**

**National Advisory Board Member:**

1. **ICCT 2020** –March 20 &21, 2020. MUSALIER College of Engineering and Technology, Pathanamthitta, Kerala, **India**.
2. **NCETTIT 2022 –National conference on Emerging Trends and Technology , VELS University, Chennai**. On **24-02-2022.**

**International Advisory Board Member/ Technical Program Committee Member/Scientific Committee Member**

1. **IISTEM** – International Institution for Science Technology Engineering and

Management

1. **Eurasia Web** - International Conferences.
2. **IIER** – International Institute of Engineers and Researchers
3. Eleventh international Conference on Cloud Computing and E governance (ICCCEG 2022) during 26 – 27 August 2022 at UK,
4. **3rd DOCTORAL SYMPOSIUM ON COMPUTATIONAL INTELLIGENCE (DOSCI 2022) Organised by Institute of Engineering & Technology, a constituent college of Dr APJ Abdul Kalam Technical University Lucknow, India**
**in association with University of Calabria, Italy**
**5th March,2022**
5. **2rd DOCTORAL SYMPOSIUM ON COMPUTATIONAL INTELLIGENCE (DOSCI 2021) Organised by Institute of Engineering & Technology, Lucknow, India March 6 2021.**
6. **ICRCET 2020** – International Conference on Recent Challenges in Engineering and Technology, October 2020(**Virtual Conference**).
7. **ICRCET 2021** – International Conference on Recent Challenges in Engineering and Technology, November 2021 at **NEWYORK**.
8. **ICRSET2021**-3rd International conference on Research in Science Engineering and Technology –March 2021 .Oxford, **United Kingdom**.
9. **ICAKMPET 2021** – International Conference on Advancing Knowledge from Multidisciplinary Perspectives in Engineering and Technology – March 2021, at **TURKEY**.
10. **CIRSY2020** – 6th International Conference on Circuits and Systems- November 2020 – **DUBAI** (UAE)
11. **ELEC 2020** – 4th International conference on Electrical Engineering- November 2020 - **DUBAI**(UAE)
12. **ICSES 2020** – International Conference on Sustainable Expert Systems- September 2020 – Tribhuvan University- **NEPAL.**
13. **INDIACom2021**- 8th International Conference on Computing for Sustainable Global Development – March 2021 at **New Delhi**
14. **ICICC 2021**- 4th International Conference on Innovative Computing and Communication – February 2021 at **New Delhi**.
15. **ICSMDT 2020** – International Conference on Smart Medical Devices and Technologies – August 2020 at **United Kingdom**
16. **RSTCONF 2020**– 10th International Conference on Research in Science and Technology – December 2020- Oxford, **United Kingdom**.
17. **KICONF 2020**– 7th International Conference on Knowledge and Innovation in Engineering, Science and Technology – December 2020 at Berlin, **Germany**.
18. **RSETCONF 2020** - International Conference on Research in Science Engineering and Technology –October 2020 – Madrid – **Spain**.
19. **ARSETCONF 2021**– 3rd International Conference on Applied Research in Science, Engineering and Technology- February 2021-Vienna,**Austria**.
20. **IRSET 2020**– 3rd International Conference on Innovative Research in Science Engineering and Technology – September 2020 –Brussels –**Belgium**.
21. **RESTCONF 2021** - 11th International Conference on Research in Engineering Science and Technology –March 2021 – Budapest – **Hungary**.
22. **ICARSET 2021–** 2ndInternational Conference on Advanced Research in Science Engineering and Technology – March 2021- Paris- **France.**
23. **ICCAP2021** – International Conference on Computer assisted Proof – March 2021-Tokiyo – **Japan**.
24. **STKCONF 2021** – 5th International Conference on Applied Research in Science Technology and Knowledge –February 2021 –Amsterdam – **Netherlands**.
25. **STECONF 2020** – 6th International Conference on Modern Approaches in Science Technology and Engineering-September 2020 – Milan –**Italy**
26. **ISTCONF 2020 –** 7th International conference on Innovation in Science and Technology –October 2020 –Amsterdam – **Netherlands**.

**List of Papers Published in International Journals / Conferences :**

1. Srinath Yasam,S ANU H Nair**, K.P.Sanal Kumar**. “Supervised learning-based seed germination ability prediction for precision farming. ***Soft Computing*** (**2022**). <https://doi.org/10.1007/s00500-022-06910-6> ( **Springer, SCIE, Web of Science ,Scopus, IF 3.6** )
2. A.Murugan, S.Anu H Nair , **K.P.Sanal Kumar,** M,Bennet Rajesh “An efficient Deep learning based segmentation and classification framework for skin lesion images”, **Journal of Cardiovascular Disease Research**, Volume 12, Issue 4, 2021, (**Scopus, Publons**)
3. **K.P.Sanal Kumar**,S.Anu H Nair,Deepsubhra Guha Roy,B.Rajalingam, R.Santhosh Kumar,”Security and privacy-aware Artificial Intrusion Detection System using Federated Machine Learning”, **December 2021,Computers & Electrical Engineering 96(4):107440.** (**Elsevier , SCIE**, **Web of Science, Scopus IF 3.8** )
4. A.Murugan, S.Anu H Nair, A.Angelin Peace Preethi and **K.P.Sanal Kumar**, “Diagnosis of skin cancer using machine learning techniques”, **March 2021**,**Microprocessors and Microsystems**, 81(1):103727,DOI:10.1016/j.micpro.2020.103727.(**Elsevier, Web of Science, Scopus IF 1.5** )
5. M.Rajendiran,**K.P.Sanal Kumar**, R.Nanda Kumar,S.Anu H Nair, “A survey on functional and cognitive assessment for diagnosing neurodegenerative disorders”,**February2021,MaterialsToday:Proceedings**,DOI:10.1016/j.matpr.2021.01.221.(**Elsevier,Scopus)**
6. L.C.Manikandan, R.K.Selva Kumar, S.Anu H Nair, **K.P. Sanal Kumar**, “Hardware implementation of fast bilateral filter and canny edge detector using Raspberry Pi for telemedicine applications”, ***J Ambient Intell Human Comput***, <https://doi.org/10.1007/s12652-020-01871-w> (**Springer , SCIE**, **Web of Science, Scopus IF 7.1** )
7. **Sanal Kumar, K.P**., Bhavani, R, “Human activity recognition in egocentric video using HOG, GiST and color features**”,*Multimed Tools Appl***. <https://doi.org/10.1007/s11042-018-6034-1>(**Springer , SCIE**, **Web of Science, Scopus IF 2.7** )
8. Manikandan, L.C.,S.Anu H Nair, **Sanal Kumar, K.P**.*et al.* A study and analysis on block matching algorithms for motion estimation in video coding.*Cluster* ***Comput* 22, 11773–11780.** [**https://doi.org/10.1007/s10586-017-1478-z**](https://doi.org/10.1007/s10586-017-1478-z)**(Springer , SCIE, Web of Science, Scopus , IF 1.8 )**
9. A.Murugan, S.Anu H Nair and **K.P.Sanal Kumar, “**Detection of Skin Cancer Using SVM, Random Forest and kNN Classifiers”, **Journal of Medical Systems** , Vol.43:269, Issue 8, pp.1-9, ISSN:0148-5598. (**Springer , Scopus,SCIE**, **Web of Science, IF 4.46** )
10. **K.P.Sanal Kumar**,R.Bhavani. “Human activity recognition in egocentric video using PNN, SVM, kNN and SVM+kNN classifiers, **ClusterComputing,** 22**,**10577–10586 (**2019)**. <https://doi.org/10.1007/s10586-017-1131-x>(**Springer , Scopus, SCIE**, **Web of Science, IF 1.8** )
11. A.Murugan, S.Anu H Nair and **K.P.Sanal Kumar**, “Research on SVM and KNN Classifiers for Skin Cancer Detection”, The International Journal of Engineering and Advanced Technology,(**IJEAT**),December/2019, Vol. 9, Issue-2, pp.4627-4632, ISSN:2249-8958. (**Scopus )**
12. E.Venkatesan, S. Anu H Nair, K. P. Sanal Kumar, ”A STUDY AND ANALYSIS OF EDUCATION DATA USING DECISION TREE ALGORITHMS “,March 2021,IEJRD, [REM - International Engineering Journal](https://www.researchgate.net/journal/REM-International-Engineering-Journal-2448-167X) 6(2):1-6.
13. I.Vinurajan, Dr. K. P. Sanal Kumar, Dr. S. Anu H Nair , “[A REVIEW ON WHITE BLOOD CELL IMAGE ANALYSIS FOR LEUKEMIA DISEASE CLASSIFICATION USING DEEP LEARNING TECHNIQUES](http://www.iejrd.com/index.php/%20/article/view/2354)”, INTERNATIONAL CONGRESS ON MODERN EDUCATION AND INTEGRATION,Vol. 6 No. ICMEI (2021).
14. M. Rajendiran, Dr. K. P. Sanal Kumar, Dr. S. Anu H. Nair, “ [REVIEW ON DIAGNOSTIC SYSTEM FOR EARLY DETECTION OF PARKINSON’S DISEASES USING MACHINE LEARNING ALGORITHMS](http://www.iejrd.com/index.php/%20/article/view/2355)”, INTERNATIONAL CONGRESS ON MODERN EDUCATION AND INTEGRATION ,Vol. 6 No. ICMEI (2021)
15. K. Kamaladevi, Dr. K. P. Sanal Kumar, Dr.S. Anu H Nair, ”, International Conference on Innovations and Recent trends in Computer Science(ICIRTCS 2022 )” PP No: 125,25-26 March 2022.(Virtual)
16. Dhanya G Nair, Dr. K. P. Sanal Kumar, Dr.S. Anu H Nair, “ A Review on social distance Monitoring Using Learning Techniques”, International Conference on Innovations and Recent trends in Computer Science(ICIRTCS 2022 )” PP No: 123,25-26 March 2022.(Virtual)
17. K. Kamaladevi, Dr. K. P. Sanal Kumar, Dr.S. Anu H Nair, “ A SURVEY ON HUMAN POSE ESTIMATION USING MACHINE LEARNING TECHNIQUES”,INTERNATIONAL CONGRESS ON MODERN EDUCATION AND INTEGRATION, Vol. 6 No. ICMEI (2021).
18. I.Vinurajan, Dr. K. P. Sanal Kumar, Dr. S. Anu H Nair , “A Technical Review on Leukemia disease classification and detection in Blood Microscopic Images using Computer Vision Techniques”, International Conference on Machine Learning and Smart Technology (ICMLST 2021),Oct 25-26,2021.PG No: 247-252.
19. M. Rajendiran, Dr. K. P. Sanal Kumar, Dr. S. Anu H. Nair, “ A Review and survey on earlier diagnosis of Alzhimers disease using various Machine Learning and Deep Learning Techniques”, International Conference on Machine Learning and Smart Technology (ICMLST 2021),Oct 25-26,2021.PG No : 295-303.
20. **Sanal Kumar**, K.P., Bhavani, R” Egocentric Activity Recognition using Bag of Visual Words”,**IJCTA,**9(3),**2016,**pp:1671-1677.(**Scopus )**
21. **K.P. Sanal Kumar** and R. Bhavani “, , Activity Recognition in Egocentric video using SVM, kNN and Combined SVMkNNClassifiers’,***IOP****Conf. Ser.: Mater. Sci. Eng.* **225** 012226, **2017** (**Scopus )**
22. SrinathYasam, DrAnu H Nair, K P Sanal Kumar”, Importance of Big Data Analytics in Agriculture and Smart Farming in JASC: Journal of Applied Science and Computations, Volume VI, Issue IV, April/2019.
23. VenkataRamana N, DrAnu H Nair, K P Sanal Kumar “Multimodal Approach for Person identification and Behavioral analysis”, in JASC: Journal of Applied Science and Computations, Volume VI, Issue IV, April/2019.
24. Murugan, A., S.Anu H Nair, **K. P. SanalKumar,”**Skin Cancer Diagnosis Using Naive Bayes and PNN Classifiers. *I-manager’s* ***Journal on Pattern Recognition***, 6(2), 25-31. **(2019**),<https://doi.org/10.26634/jpr.6.2.16761>
25. **K.P.Sanal Kumar**, R.Bhavani ‘,(2016) Analysis of SVM and kNN Classifiers For Egocentric Activity Recognition’,ICIA-16: Proceedings of the International Conference on Informatics and Analytics August **2016** Article No.: 83 Pages 1–5 <https://doi.org/10.1145/2980258.2980433> (ACMDL)
26. **Sanal Kumar**K.P., Bhavani R,” Egocentric Activity Recognition using HOG,HOF and MBH features”,5(7),**IJRITCC,2017**.pp:236-240.
27. **Sanal Kumar**, K.P., Bhavani, R,” Egocentric Activity Recognition using HOG,HOF, MBH and Combined features”,3(8),**IJFRCSCE,2017**.pp:74-79.
28. **Sanal Kumar**, K.P., Bhavani, R,” Egocentric Activity Recognition using Histogram oriented Features and Textural features”,2(6),**IJSRCSEIT,2017**.pp:397-405
29. **Sanal Kumar**, K.P., Bhavani, R,” Egocentric Activity Recognition using combined SVMkNN Classifiers**”,IJIRCCE,5(10),2017**,pp:15982-15988
30. A.Murugan, S.Anu H Nair and K.P.Sanal Kumar, “Skin cancer diagnosis using Naive bayes and PNN classifiers” in the International Conference on Smart Automation in Computer, Electrical, Electronics and Communication Engineering (ICSA-2K19) organized by SRM Valliammal Engineering College, SRM Nagar, Kattankulathur, on 6th September 2019.
31. A.Murugan, S.Anu H Nair and K.P.Sanal Kumar, “Skin cancer detection using PNN and SVM classifiers” in the International Conference on Advances in Computing and Information Technology (ICACIT’19) organized by the Department of Computer Science and Engineering, FEAT, Annamalai University during 24-25 September 2019.
32. VenkataRamana N, Dr Anu H Nair, K P Sanal Kumar, ”Image processing approach in classification of Lung diseases using various machine Learning techniques” ”, International Conference on Advances in Computing and Information Technology,AnnamalaiUniversity,24-25 Septemper 2019. ICACIT-2019.
33. SreenivasaRao.D, Dr Anu H Nair, K P Sanal Kumar, “Classification of Lung diseases using Various machine Learning techniques”, International Conference on Advances in Computing and Information Technology,AnnamalaiUniversity,24-25 Septemper 2019. ICACIT-2019.
34. VenkataRamana N, Dr Anu H Nair, K P Sanal Kumar “Multimodal Approach for Person identification and Behavioral analysis”, International Conference on Engineering and Technology, ICETPM-2019.
35. VenkataRamana N, Dr Anu H Nair, K P Sanal Kumar “Behaviour Analysis of Suicide Risk Assessment and Prevention Methodology”, International Conference on Advances in Computing and Information Technology, AnnamalaiUniversity,24-25 Septemper 2019. ICACIT-2019.
36. A.Murugan, S.Anu H Nair and K.P.Sanal Kumar, “Analysis of Segmentation Techniques for Skin Cancer Detection using Thresholding and K-Means Clustering” in the DST-PURSE sponsored National Conference on Machine Learning Techniques (NCMLT-2018) organized by the Department of Computer Science and Engineering, FEAT, Annamalai University during 12-13 December 2018.
37. K.P.SanalKumar,R.Bhavani, “Human Activity Recognition in Egocentric Video using FAST Feature” in the DST-PURSE sponsored National Conference on Machine Learning Techniques (NCMLT-2018) organized by the Department of Computer Science and Engineering, FEAT, Annamalai University during 12-13 December 2018

**Faculty Development Program / Orientation / Refresher Course/Webinar Attended / Certificate Programs/ STTP/ STC**

1. Attended **28 days Orientation Program at University of Madras** from 01.02.2020 to 28.02.2020.
2. Attended **14 days Refresher Course at University of Madras** from 28.01.2021 to 04.2.2021.
3. Attended **Five days FDP in Tamil Virtual University** during 19-10-2020 to 23.10.2020.
4. **30 Days Master class FDP on Data Science and Analytics** , at PANTECH e Learning PVT Ltd Chennai From 20.01.2022 to 18.02.2022.
5. Recent Trends in Power Electronics using MATLAB 22nd May Hosted by St Peters Engineering College.
6. ML for Health care Applications 21ST MAY 2020 Hosted by SREYAS Engineering College .
7. Deep Learning using python , 20th May 2Hosted by PANIMALAR Institute of Technology
8. How Agri and IOT get Connected on 19 th May Mohammed Sathak College of engineering.
9. Virtual Reality on 14th May Hosted by Department of CSE , SRM Ramapuram Campus.
10. Deep Vision For Autonomous Self Driving Cars on 16th may 2020 Hosted by University College for women , KOTI.

**Date: 11=06-2022, (Dr.K.P.Sanal Kumar)**

**Place: Chennai**.