


FACULTY PROFILE

Name of Teaching Staff / RMK ID	Dr.S.Neelakandan / T1057		
Designation	Associate Professor (Gr II)		
Department	Computer Science and Engineering		
Date of Joining the Institution	08-09-2021		
Qualifications	M.E.,Ph.D		
Total Experience	Overall: 15	in RMK: 2	
Papers Published in Journal	Overall: 56	After Joining RMK: 43	
List of Papers Published	<p>SCI - ARTICLES</p> <ol style="list-style-type: none"> 1) Neelakandan, S & Paulraj, D 2020, ‘A gradient boosted decision tree-based sentiment classification of twitter data’, International Journal of Wavelets, Multiresolution and Information Processing, vol. 18, no. 4, pp. 205027 1-21. DOI: https://doi.org/10.1142/S0219691320500277 2) Neelakandan, S & Paulraj, D 2020, ‘An Automated Exploring And Learning Model For Data Prediction Using Balanced CA-SVM’, Journal of Ambient Intelligence and Humanized Computing, Vol.12 ,no.5, April 2020 , DOI: https://doi.org/10.1007/s12652-020-01937-9 3) Neelakandan, S., Berlin, M.A., Tripathi, S. et al. IoT-based traffic prediction and traffic signal control system for smart city. Soft Computing (2021). https://doi.org/10.1007/s00500-021-05896-x 4) R. Kamalraj, S. Neelakandan, M. Ranjith Kumar, V. Chandra Shekhar Rao, Rohit Anand, Harinder Singh, "Interpretable filter based convolutional neural network (IF-CNN) for glucose prediction and classification using PD-SS algorithm", Measurement, Vol.183,2021, https://doi.org/10.1016/j.measurement.2021.109804. 5) Kavitha, T., Mathai, P.P., Karthikeyan, C. et al. Deep Learning Based Capsule Neural Network Model for Breast Cancer Diagnosis Using Mammogram Images. Interdiscip Sci Comput Life Sci (2021). https://doi.org/10.1007/s12539- 		

021-00467-y

- 6) C Pretty Diana Cyril, J Rene Beulah, Neelakandan Subramani, Prakash Mohan, A Harshavardhan, D Sivabalaselvamani, An automated learning model for sentiment analysis and data classification of Twitter data using balanced CA-SVM, *Concurrent Engineering Research and Applications*, Vol.29, No.4, pp 386-395.
- 7) Reshma, G., Al-Atroshi, C., Nassa, V. K., Geetha, B., Neelakandan.S. et al. (2022). Deep Learning-Based Skin Lesion Diagnosis Model Using Dermoscopic Images. *Intelligent Automation & Soft Computing*, vol.31, no.1, pp.621–634.
- 8) **Neelakandan, S.**, Arun, A., Bhukya, R. R., Hardas, B. M., Ch., T. et al. (2022). An Automated Word Embedding with Parameter Tuned Model for Web Crawling. *Intelligent Automation & Soft Computing*, 32(3), 1617–1632.
- 9) P. Asha, L. Natrayan, B.T. Geetha, J. Rene Beulah, R. Sumathy, G. Varalakshmi, S. Neelakandan, IoT enabled environmental toxicology for air pollution monitoring using AI techniques, *Environmental Research*, Volume 205, 2022, 112574, <https://doi.org/10.1016/j.envres.2021.112574>.
- 10) D. Venu, A.V.R. Mayuri, **S. Neelakandan**, G.L.N. Murthy, N. Arulkumar, Nilesh Shelke, An efficient low complexity compression based optimal homomorphic encryption for secure fiber optic communication, *Optik*, Vol 252, 2022, pp.168545, <https://doi.org/10.1016/j.ijleo.2021.168545>
- 11) D. K. Jain, S. K. S. Tyagi, S. Neelakandan, M. Prakash and L. Natrayan, "Metaheuristic Optimization-Based Resource Allocation Technique for Cybertwin-Driven 6G on IoE Environment," in *IEEE Transactions on Industrial Informatics*, vol. 18, no. 7, pp. 4884-4892, July 2022, doi: 10.1109/TII.2021.3138915.
- 12) **Subramani, Neelakandan**, Prakash Mohan, Youseef Alotaibi, Saleh Alghamdi, and Osamah I. Khalaf. 2022. "An Efficient Metaheuristic-Based Clustering with Routing Protocol for Underwater Wireless Sensor Networks" *Sensors* 22, no. 2: 415. <https://doi.org/10.3390/s22020415>
- 13) Gurram Sunitha, K. Geetha, **S. Neelakandan**, Aditya Kumar Singh Pundir, S. Hemalatha, Vinay Kumar, Intelligent deep learning-based ethnicity recognition and classification using facial images, *Image and Vision Computing*, Vol. 121, 2022, <https://doi.org/10.1016/j.imavis.2022.104404>.
- 14) **Mohan.P, Subramani, N.;** Alotaibi, Y.; Alghamdi, S.; Khalaf, O.I.; Ulaganathan, S. Improved Metaheuristics-Based Clustering with Multihop Routing Protocol for Underwater Wireless Sensor Networks. *Sensors* 2022, 22, 1618. <https://doi.org/10.3390/s22041618>
- 15) Harinder Singh, D. Ramya, R. Saravanakumar, Nayani Sateesh, Rohit Anand, Swarnjit Singh, S. Neelakandan, Artificial intelligence based quality of transmission predictive model for cognitive optical networks, *Optik*, Vol. 257, 2022, <https://doi.org/10.1016/j.ijleo.2022.168789>.

- 16) Anuradha, D.; **Subramani, N.**; Khalaf, O.I.; Alotaibi, Y.; Alghamdi, S.; Rajagopal, M. Chaotic Search-and-Rescue-Optimization-Based Multi-Hop Data Transmission Protocol for Underwater Wireless Sensor Networks. *Sensors* 2022, 22, 2867. <https://doi.org/10.3390/s22082867>.
- 17) B.T. Geetha, P. Santhosh Kumar, B. Sathya Bama, **S. Neelakandan**, Chiranjit Dutta, D. Vijendra Babu, Green energy aware and cluster-based communication for future load prediction in IoT, *Sustainable Energy Technologies and Assessments*, Vol.52,2022,102244, <https://doi.org/10.1016/j.seta.2022.102244>.
- 18) A. Harshavardhan, Prasanthi Boyapati, S. Neelakandan, Alhassan Alolo Abdul-Rasheed Akeji, Aditya Kumar Singh Pundir, Ranjan Walia, "LSGDM with Biogeography-Based Optimization (BBO) Model for Healthcare Applications", *Journal of Healthcare Engineering*, vol. 2022, Article ID 2170839, 11 pages, 2022. <https://doi.org/10.1155/2022/2170839>
- 19) S. Parthiban, A. Harshavardhan, S. Neelakandan, Vempaty Prashanthi, Abdul-Rasheed Akeji Alhassan Alolo, S. Velmurugan, "Chaotic Salp Swarm Optimization-Based Energy-Aware VMP Technique for Cloud Data Centers", *Computational Intelligence and Neuroscience*, vol. 2022, Article ID 4343476, 9 pages, 2022. <https://doi.org/10.1155/2022/4343476>
- 20) M. Kavitha, B. Sankara Babu, B. Sumathy, T. Jackulin, N. Ramkumar et al., "Convolutional neural networks-based video reconstruction and computation in digital twins," *Intelligent Automation & Soft Computing*, vol. 34, no.3, pp. 1571–1586, 2022.
- 21) S.Raghavendar, A.Hardhavardhan, S.Neelakandan, R.Partheepan, Ranjan Walia and V.Chandra Shekar Rao, Multilayer Stacked Probabilistic Belief Network-Based Brain Tumor Segmentation and Classification “*International Journal of Foundations of Computer Science*”, <https://doi.org/10.1142/S0129054122420047>
- 22) Neelakandan S, Perumal SK, Kallimani JS, Ulaganathan S, Bhargava S, Meekanizi S. Controlling energy aware clustering and multihop routing protocol for IoT assisted wireless sensor networks. *Concurrency Computat Pract Exper.* 2022;e7106. doi: 10.1002/cpe.710
- 23) Neelakandan S, Sridevi M, Saravanan Chandrasekaran, Murugeswari, Bheema Lingaiah, "Deep Learning Approaches for Cyberbullying Detection and Classification on Social Media", *Computational Intelligence and Neuroscience*, vol. 2022, 2022. <https://doi.org/10.1155/2022/2163458>
- 24) Deepak Kumar Jain, S. Neelakandan, T. Veeramani, Surbhi Bhatia, Fida Hussain Memon, Design of fuzzy logic-based energy management and traffic predictive model for cyber physical systems, *Computers and Electrical Engineering*, Vol 102,2022,108135, <https://doi.org/10.1016/j.compeleceng.2022.108135>.
- 25) Lakshmana, K.; Subramani, N.; Alotaibi, Y.; Alghamdi, S.; Khalafand, O.I.; Nanda, A.K. Improved Metaheuristic-Driven Energy-Aware Cluster-Based Routing Scheme for IoT-Assisted Wireless Sensor Networks. *Sustainability* 2022, 14, 7712. <https://doi.org/10.3390/su14137712>

- 26) Neelakandan S, D. Paulraj, P. Ezhumalai & M. Prakash (2022) A Deep Learning Modified Neural Network(DLMNN) based proficient sentiment analysis technique on Twitter data, Journal of Experimental & Theoretical Artificial Intelligence, DOI: 10.1080/0952813X.2022.2093405
- 27) Keshetti Sreekala, C. Pretty Diana Cyril, S. Neelakandan, Saravanan Chandrasekaran, Ranjan Walia, Eric Ofori Martinson, "Capsule Network-Based Deep Transfer Learning Model for Face Recognition", Wireless Communications and Mobile Computing, vol. 2022, <https://doi.org/10.1155/2022/2086613>
- 28) S. Neelakandan, Ahmed Mohammed Metwally, Madhappan Santhamoorthy, M. Satyanarayana Gupta, Metaheuristics with Deep Transfer Learning Enabled Detection and classification model for industrial waste management, Chemosphere, 2022, 136046, <https://doi.org/10.1016/j.chemosphere.2022.136046>.
- 29) Deepak Kumar Jain, Xue Liu, Subramani Neelakandan, and Mohan Prakash "Modeling of human action recognition using hyperparameter tuned deep learning model," Journal of Electronic Imaging 32(1), 011211 (14 September 2022). <https://doi.org/10.1117/1.JEI.32.1.011211>
- 30) J. Faritha Banu, S. Neelakandan, B.T Geetha, V. Selvalakshmi, A. Umadevi, Eric Ofori Martinson, "Artificial Intelligence Based Customer Churn Prediction Model for Business Markets", Computational Intelligence and Neuroscience, vol. 2022, 2022. <https://doi.org/10.1155/2022/1703696>
- 31) Raghavendra S, S. Neelakandan, M. Prakash, B.T. Geetha, S. Mary Rexcy Asha, Michaelraj Kingston Roberts, Artificial Humming Bird with Data Science Enabled Stability Prediction Model for Smart Grids, Sustainable Computing: Informatics and Systems, vol.36,2022,<https://doi.org/10.1016/j.suscom.2022.100821>
- 32) Awari, H., Subramani, N., Janagaraj, A., Balasubramaniapillai Thanammal, G., Thangarasu, J., & Kohar, R. (2022). Three-dimensional dental image segmentation and classification using deep learning with tunicate swarm algorithm. Expert Systems, e13198. <https://doi.org/10.1111/exsy.13198>
- 33) Gangathimmappa, M, Subramani, N, Sambath, V, Ramanujam, RAM, Sammeta, M. Deep learning enabled cross-lingual search with metaheuristic web-based query optimization model for multi-document summarization. Concurrency Computation Practice Experience. 2022;e7476. doi:10.1002/cpe.7476
- 34) Shanmugavadivel, K., Sathishkumar, V.E., Neelakandan.S. et al. Deep learning based sentiment analysis and offensive language identification on multilingual code-mixed data. Sci Rep 12, 21557 (2022). <https://doi.org/10.1038/s41598-022-26092-3>
- 35) Mohan,P.; Veerappampalayam Easwaramoorthy, S.; Subramani, N.; Subramanian, M.; Meckanazi, S. Handcrafted Deep-Feature-Based Brain Tumor Detection and Classification Using MRI Images. Electronics 2022, 11, 4178. <https://doi.org/10.3390/electronics11244178>

- 36) Arul Vinayakam Rajasimman M, Manoharan RK, Subramani N, Aridoss M, Galety MG. Robust Facial Expression Recognition Using An Evolutionary Algorithm with a Deep Learning Model. *Applied Sciences*. 2023; 13(1):468. <https://doi.org/10.3390/app13010468>
- 37) Zhenwei Zhao, Xiaoming Li, Bing Luan, Weining Jiang, Weidong Gao, Subramani Neelakandan, Secure Internet of Things (IoT) using a Novel Brooks Iyengar Quantum Byzantine Agreement-centered blockchain Networking (BIQBA-BCN) Model in Smart Healthcare, *Information Sciences*, 2023, <https://doi.org/10.1016/j.ins.2023.01.020>.
- 38) Alharbi, M., Neelakandan, S., Gupta, S. et al. Mobility aware load balancing using Kho–Kho optimization algorithm for hybrid Li-Fi and Wi-Fi network. *Wireless Networks* (2023). <https://doi.org/10.1007/s11276-022-03225-0>
- 39) Neelakandan Subramani, Abbas Mardani, Prakash Mohan, Arunodaya Raj Mishra, Ezhumalai P. A fuzzy logic and DEEC protocol-based clustering routing method for wireless sensor networks[J]. *AIMS Mathematics*, 2023, 8(4): 8310-8331. doi: 10.3934/math.2023419
- 40) Saravanan, G., Neelakandan, S., Ezhumalai, P. et al. Improved wild horse optimization with levy flight algorithm for effective task scheduling in cloud computing. *J Cloud Comp* 12, 24 (2023). <https://doi.org/10.1186/s13677-023-00401-1>
- 41) Prakash Mohan, S. Neelakandan, Abbas Mardani, Sudhanshu Maurya & N. Arulkumar (2023) Eagle Strategy Arithmetic Optimisation Algorithm with Optimal Deep Convolutional Forest Based FinTech Application for Hyper-automation, *Enterprise Information Systems*, DOI: 10.1080/17517575.2023.2188123
- 42) Sethukarasi T, Neelakandan S, Prakash M, Baburaj E (2023) An Efficient Hybrid Job Scheduling Optimization (EHJSO) approach to enhance resource search using Cuckoo and Grey Wolf Job Optimization for cloud environment. *PLOS ONE* 18(3): e0282600. <https://doi.org/10.1371/journal.pone.0282600>
- 43) Paulraj, D., Neelakandan, S., Prakash, M. et al. Admission control policy and key agreement based on anonymous identity in cloud computing. *J Cloud Comp* 12, 71 (2023). <https://doi.org/10.1186/s13677-023-00446-2>

Scopus Article

- 44) Neelakandan, S, Annamalai, R., Rayen, S. J., & Arunajsmine, J. (2020). Social Media Networks Owing to Disruptions For Effective Learning. *Procedia Computer Science*, Vol.172, pp.145–151. doi:10.1016/j.procs.2020.05.022
- 45) S. Neelakandan and J. Gokul Anand, "Trust based optimal routing in MANET's," 2011 International Conference on Emerging Trends in Electrical and Computer Technology, Nagercoil, India, 2011, pp. 1150-1156, doi: 10.1109/ICETECT.2011.5760293.
- 46) S.Divyabharathi, "Large scale optimization to minimize network traffic using MapReduce in big data applications". International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), pp. 193-199, April

2016. DOI : 10.1109/ICCPEIC.2016.7557196

- 47) Itnal, S., Kannan, K.S., Suma, K.G., Neelakandan, S. (2022). A Secured Healthcare Medical System Using Blockchain Technology. In: Kumar, A., Mozar, S. (eds) ICCCE 2021. Lecture Notes in Electrical Engineering, vol 828. Springer, Singapore. https://doi.org/10.1007/978-981-16-7985-8_17
- 48) **S.Neelakandan**, J. Rene Beulah,L.Prathiba, G.L.N Murthy, E. Fantin Irudaya Raj and N. Arulkumar ,” Blockchain with deep learning-enabled secure healthcare data transmission and diagnostic model”, International Journal of Modeling, Simulation, and Scientific Computing, <https://doi.org/10.1142/S1793962322410069>
- 49) **S. Neelakandan**, S., Prakash, M., Bhargava, S., Mohan, K., Robert, N.R., Upadhye, S. (2022). Optimal Stacked Sparse Autoencoder Based Traffic Flow Prediction in Intelligent Transportation Systems. Studies in Systems, Decision and Control, vol 412. Springer, Cham. https://doi.org/10.1007/978-3-030-94102-4_6
- 50) Siripuri Kiran, **S. Neelakandan**, A. Pratapa Reddy, Sonali Goyal, Balajee Maram, V. Chandra Shekhar Rao, Chapter 11 - Internet of things and wearables-enabled Alzheimer detection and classification model using stacked sparse autoencoder, Wearable Telemedicine Technology for the Healthcare Industry, Academic Press,2022, pp 153-168,<https://doi.org/10.1016/B978-0-323-85854-0.00012-5>.
- 51) S.Neelakandan, K Keerthika, P Ilanchezhian, TS Madeswaran ,Quantum Invasive Weed Optimization Based Energy Aware Task Scheduling For Cyber–Physical System Environment , International Journal of Modeling, Simulation, and Scientific Computing, <https://doi.org/10.1142/S1793962323410167>
- 52) P. Ravi Prakash, D. Anuradha, Javid Iqbal, Mohammad Gouse Galety, Ruby Singh & S. Neelakandan (2022) A novel convolutional neural network with gated recurrent unit for automated speech emotion recognition and classification, Journal of Control and Decision, DOI: 10.1080/23307706.2022.2085198
- 53) Chiai AI-Atroshi, J. Rene Beulah, Kranthi Kumar Singamaneni, C. Pretty Diana Cyril, S. Neelakandan & S. Velmurugan (2022) Automated speech based evaluation of mild cognitive impairment and Alzheimer’s disease detection using with deep belief network model, International Journal of Healthcare Management, DOI: 10.1080/20479700.2022.2097764.
- 54) Sachin Upadhye, S. Neelakandan, K. Thangaraj, D. Vijendra Babu, N. Arulkumar, Kashif Qureshi,” Modeling of Real Time Traffic Flow Monitoring System Using Deep Learning and Unmanned Aerial Vehicles”, Journal of Mobile Multimedia, Vol.19, No.2, 2023, doi.org/10.13052/jmm1550-4646.1926
- 2023
- 55) Subramani, N.; Veerappampalayam Easwaramoorthy, S.; Mohan, P.;

	<p>Subramanian, M.; Sambath, V. A Gradient Boosted Decision Tree-Based Influencer Prediction in Social Network Analysis. Big Data Cogn. Comput. 2023, 7, 6. https://doi.org/10.3390/bdcc7010006</p> <p>56) Ashok Kumar Nanda, Neelakandan. S, Sachi Gupta, Angel Latha Mary Saleth, Ramya. S, Siripuri Kiran, Multi-layer perceptron's neural network with optimization algorithm for greenhouse gas forecasting systems, Environmental Challenges, Vol.11,2023,https://doi.org/10.1016/j.envc.2023.100708</p>	
Papers Presented in Conferences (Scopus / WoS indexed only)	Overall : 5	After Joining RMK : 2
Ph.Ds / Projects Guided	Ph.Ds Guided : 4	Student Projects Guided : 35
Books Published :	Count : 1	
	<ol style="list-style-type: none"> 1. List: S.Neelakandan,R.Annamalai, S.Sudhamercy “ Problem Solving and Python Programming” 2017 Regulations - Charulatha Publication, November 2020. 	
Patents	Published Count : 4	Granted Count :
	List : <ol style="list-style-type: none"> 1. S.Neelakandan “Safe Route Identification on emergency Evacuation Based on Ant-Colony Optimization Through Artificial Intelligence and IoT”(Patent No – 202041048243) Published on 13-11-2020. 2. S.Neelakandan “Medical Emergency Alert Scheme Through Wireless Sensor Network and the Cloud Computing at Populated Places”(Patent No – 202041009022) Published on 06-03-2020. 3. S.Neelakandan “The Traffic Management System Based On Density and Flow Control Mechanism”(Patent No – 202041005119) Published on 14-02-2020. 4. S.Neelakandan ,”Mobile Application Based IoT System For Integrated Farm”,(Patent No- 202141046167) Published on 19/11/2021 	
Professional Memberships	Count : 3	
	List : <ol style="list-style-type: none"> 1. IEEE – Senior Member - 97875342 2. ISTE LIFETIME MEMBERSHIP – LM104488 3. IAENG – Member No: 140699 	

Consultancy Projects Completed	Count : 3
Awards Received	Count : 6
	List : <ol style="list-style-type: none"> 1. Received the Best Faculty award for the academic year 2015-2016, 2016-2017 at Jeppiaar Institute of Technology in CSE Department. 2. Received the Best Faculty award for the academic year 2017-2018,2018-2019 at Jeppiaar Institute of Technology in IT Department. 3. Recognized as Award of Appreciation for Produced 100% Result in Anna University Exam for the academic year 2016-17,2017-18 at Jeppiaar Institute of Technology. 4. Infosys Campus Connect Partners in Success 2016 recognized as BRONZE partner Faculty under Inspire-The Campus Connect Faculty Partnership Model. 5. Received “Confederation of Elite Academicians of IIDC 2019” for Outstanding Contributions from Department of Science and Technology and Texas Instruments powered by AICTE mission. 6. Smart India Hackathon coordinator and mentor for 2020(SIH-2020). Team Area51(PJ239)under my guidance received 1-Lakh Cash award in SIH2020 Grand Finale – Web Application for Grey Market Complaint.
Research grants Received	
Orchid Link / ID	ID : https://orcid.org/0000-0001-8583-0019
Google Scholar Link / ID	ID : https://scholar.google.co.in/citations?user=i-kxW90AAAAJ&hl=en
Vidwan Link / ID	ID : https://rmkec.irins.org/profile/305338
Research Gate Link / ID	ID : https://www.researchgate.net/profile/Neelakandan-Subramani?ev=hdr_xprf
Scopus Link / ID	ID : https://www.scopus.com/authid/detail.uri?authorId=57023847500