

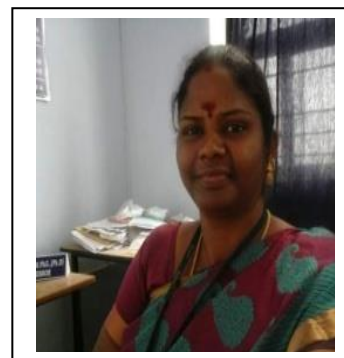
Name: Dr.K.SUMATHI

Designation: Assistant Professor

Department: BCA

Date of Joining: 14.09.2020

**Email: sumathirajkumar2006@gmail.com,
k.sumathi@americancollege.edu.in**



Educational Qualification:

Degree	Subject	College / University & Place	Year Completed
B. Sc	Physics	Madurai Meenakshi Girls Govt. College, Madurai	1998
MCA	Computer Applications	Madurai Kamaraj University Evening College(Regular), Madurai	2001
M.Phil(CS)	Computer Science	Madurai Kamaraj University, Madurai	2008
Ph.D.(CS)	Computer Science	Madurai Kamaraj University, Madurai	2015

Specialisation in Teaching: Problem Solving using Programming in C, C++, JAVA, Web Programming, Data Mining, RDBMS, OS

Specialisation in Research: Data Mining (Frequent Itemset Mining)

Research Interests: Machine Learning, Deep Learning, Computer Vision

Other Work Experience:

Designation	Institution / Company	Year - From (month/year) To (month/year)
Assistant Professor, BCA Department	The American College, Madurai	4 years 5 Months – (14.9.2020 – till now)
Head & AP – CS Department	Senthamarai College of Arts and Science, Madurai	9 Months – (From 2.12.2019 to 10.9.2020)
Assistant Professor, Department Of CS & IT	Kalasalingam Academy of Research and Education	4 Years 5 Months – (From 09-07-2015 to 29.11.2019)
Assistant Professor, Department of Computer	K.L.N. College of Information Technology, pottapalayam,	4 Years 8 Months – (From 01-07-2010 to 31-03-2015)

Applicatios -MCA	Sivagangai Dt.	
Lecturer, Department of Computer Applicatios -MCA	K.L.N. College of Information Technology, pottapalayam, Sivagangai Dt.	2 Years 5 Months- (From 01-02-2008 to 30-06-2010)
Lecturer, Department of Computer Science Engineering	Tamilnadu Polytechnic College, Madurai	1 Year 10 Months – (From 15-02-2006 to 30-12-2007)
Faculty	Smart Infotech Franchisee of Aptech Ltd., Thirumangalam, Madurai	2 Years 3 Months - (From 01-05-2002 To 31-07-2004)
Lecturer, Department of Computer Science.	V.P.M.M arts and Science College for Women, Krishnan Koil, Virudhunagar Dt.	8 Months - From (03-09-2001 To 24-04-2002)

Membership in Professional Bodies:

1. Life Member of Indian Society of Technical Education – LM81561
2. Member of International Computer Science and Engineering Society – 1485

Administrative /Academic Position/s (held/currently holding):

Positions held / currently holding	Year - From (month/year) To month/year)
Academic Advisor	Sep 2020 – till now
Project Guide	Sep 2020 – till now

Publications:

Books:

Java for Bigginers, Dr.S.RamKumar, Dr.K.sathesh kumar, Dr.K.Sumathi, SiteTech Publications, ISBN No. – 9789385983580

Patent Granted:

A patent titled “REAL-TIME AGRARIAN DECISION SUPPORT SYSTEM”, filed on 10.10.2018, in India. Application Number: 201841038453, Granted on 07.06.2023, Patent No: 434050. Patent granted for 20 years from the date of filing.

Lecture Notes/Book Chapter (Scopus Indexed)

1. K.Sumathi, S. Kundavai Santharam, K.Selvarani , “Smart Analytucs System for Digital Farming” , Springer Book Chapter in “Algorithms for Intelligent Systems”. Springer, Singapore, DOI : https://doi.org/10.1007/978-981-99-7962-2_14, First Online: 07 January 2024
Print ISBN 978-981-99-7999-8, Online ISBN978-981-99-7962-2
https://link.springer.com/chapter/10.1007/978-981-99-7962-2_14
2. Sumathi, K., Santharam, K. (2023). Sentiment Analysis on Feedback Data of E-commerce Products Based on NLP. Inventive Systems and Control. Lecture Notes in Networks and Systems, vol 672. Springer, Singapore. https://doi.org/10.1007/978-981-99-1624-5_29, june 2023, (**scopus indexed**)
https://link.springer.com/chapter/10.1007/978-981-99-1624-5_29
3. K.Sumathi, S.Kannan, K.Nagarajan , “ Maximal Frequent Itemset Mining using Breadth First Search with Efficient Pruning“, Springer Lecture Notes on Data Engineering and Communications Technologies, Vol. 15, sep, 2018, S. Smys et al. (Eds). (**scopus indexed**)

Articles Published in International Journals:

1. K.Sumathi, K.Nagarajan, Analyzing students’ Academic performance based on family backgrounds using MS-Azure ML Studio, International Explore Journal of Computer Science and Applications, Vol. I Issue 1 April 2022
2. Dr.K.Sumathi1, Dr.K.Selvarani, Relevance of ICT Tools in Teaching-Learning Exploiting Flipped Classroom, Journal of Critical Reviews, ISSN- 2394-5125, Vol 7, Issue 13, 2020, pg.nos. 1048-1052
3. Prof. Kundhavai S, Dr.K.Sumathi, Dr.Inayath Ahamed S.B, Role of Artificial Intelligence while hiring through referral recruitment: A conceptual review and model for future research, International Journal of Psychosocial Rehabilitation, ISSN: 1475-7192, Volume 24, Issue 5, DOI: 10.37200/IJPR/V24I5/PR202056, Pages: 3453-3464.
4. K Sumathi, N Selvalakshmi, A Meenakshi, Reviewing the Impact of ICT Usage on Academic Performance among Students of Higher Learning, Our Heritage 68 (30), 7487-7492 , Vol. 68 No. 30 (2020): Vol-68-Issue-30-February-2020
5. K.Nagarajan, K.Sumathi, Megha Nagarajan, Advanced Agro Field & Crop Surveillance Systems, International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-8 Issue-4S2, December 2019, DOI:10.35940/ijrte.D1124.1284S219 Published By: Blue Eyes Intelligence Engineering & Sciences Publication
6. K.Sumathi, P. Deepalakshmi, K. Nagarajan, Guided Analytics Platform for Southern Region of Tamilnadu Farmer Fraternity, International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-1S4, December 2019, DOI:10.35940/ijeat.A1123.1291S419 Published By: Blue Eyes Intelligence Engineering & Sciences Publication
7. K. Sumathi, P. Deepalakshmi, K. Selvarani, , Data Analytics System for Irrigation Alert, Fertilizer and Pesticide Recommendation towards Sustainable Agriculture, International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-

- 3878, Volume-8 Issue-4S2, December 2019, Published By: Blue Eyes Intelligence Engineering & Sciences Publication DOI: 10.35940/ijrte.D1103.1284S219
8. A. Srividhya, K.Sumathi, Analysis of Crop Production Dataset using R Tool, International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-1S4, December 2019, DOI:10.35940/ijeat.A1100.1291S419 Published By: Blue Eyes Intelligence Engineering & Sciences Publication
 9. Kundhavai Santharam , K. Sumathi and S.B. Inayath Ahamed, “Empirical Study Assessing Standards of Inter-Cultural Competence Aligning Global Workforce Fit of Students W.R.T. Regional University in Southern India”, Indian Journal of Science and Technology, Vol 12(12), DOI: 10.17485/ijst/2019/v12i12/143046, March 2019 ISSN (Print) : 0974-6846 ISSN (Online) : 0974-5645, (**Web of Science journal**)
 10. K.Sumathi, S. Kundhavai, K.Selvarani, K.Nagarajan, Irrigation Alert System for farmers based on External Intelligence and Field Sensors data, International Journal of Innovative Technology and Exploring Engineering (IJITEE)ISSN: 2278-3075, Volume-8 Issue-8 June, 2019, Pg.nos -48-53 (**Scopus Indexed Journal**)
 11. K.Sumathi, A.Srividhya “Analysis of Student Dataset using Machine Learning Algorithms”, Journal of Emerging Technologies and Innovative Reaserch (ISSN : 2349 – 5162), Volume 6, Issue 3, IF : 5.87
 12. K.Sumathi, Kundhavai Santharam, N.Selvalakshmi, “Analysing students’ database based on academic activities using classification techniques”, International Journal of Pure and Applied Mathematics, volume 119, issue 12, page nos. 13709-13718, ISSN-1311-8080, July,2018
 13. Data Mining: Analysis of student database using Classification Techniques, Dr.K.Sumathi, Dr.S.Kannan, Ms.K.Nagarajan, International Journal of Computer Application, Volume 141 (8), 22-27, 2016. (Impact Factor=.78)
 14. Reviewing the impact of Smartphone usage on academic performance among students of higher learning, Dr.K.Sumathi, Mrs.N.selvalakshmi, Ms.S.Kundavai, International Journal of Pure and Applied Mathematics, volume 118, issue 8, page nos. 1-7, ISSN-1311-8080, January,2018
 15. A Meta Analysis View on Suitability of its based solution when commercial viability of business is affected by disaster, Ms.S.Kundavai, Dr.K.Sumathi, Mrs.N.selvalakshmi, International Journal of Pure and Applied Mathematics, volume 118, issue 8, page nos. 65-71,ISSN-1311-8080, January,2018
 16. Handling of Big Data with a Novel Solution Architecture on Smart Grids , International Journal of Pure and Applied Mathematics,E.LaxmiLydia, RM.Vidhyavathi, A.Kaveena Rebecca, Dr.K.Sumathi, volume 118, issue 7, page nos. 367-371,ISSN-1311-8080, January,2018
 17. A Search Space Reduction Algorithm for Mining Maximal Frequent Itemset, Mrs.K.Sumathi, Dr. S.Kannan, Mr.K.Nagarajan, International Journal of Computer Applications (0975 – 8887) Volume 82 – No.9, November 2013
 18. Discovering Maximal Frequent Item set using Association Array and Depth First Search Procedure with Effective Pruning Mechanisms, Mrs.K.Sumathi, Dr. S.Kannan, Mr.K.Nagarajan, International Journal of Computer Applications (0975 – 8887) Volume 76 – No.13, August 2013.

19. A New MFI Mining Algorithm with effective Pruning Mechanisms, Mrs.K.Sumathi, Dr. S.Kannan, Mr.K.Nagarajan, International Journal of Computer Applications (0975 – 8887) Volume 41– No.6, March 2012.
20. Improving Maximal Frequent Itemset Mining for Sparse Dataset, Mrs.K.Sumathi, Dr. S.Kannan, Mr.K.Nagarajan, IFRSA International Journal of Data Warehousing & Mining, Vol 3, issue4, November 2013.

Conference/Seminar Presentations:

1. Megha Nagarajan ,K Sumathi, “The Role of Age and Glucose Levels in Stroke Prediction: An NLG-Based Analysis”, 5th International Conference on Artificial Intelligence and Smart Energy (ICAIS 2025), 30-31, January 2025, at JCT College of Engineering and Technology Coimbatore, India, proceedings by Springer.
2. Dr.Kundhavai Santharam, Dr.K.Sumathi, Dr. S.B. Inayath Ahamed, “A Comprehensive Analysis of Factors Influencing Students’ Academic Performance and Job Placement Using MS-Azure ML”, 6th International Conference on Mobile Computing and Sustainable Informatics (ICMCSI 2025), January 7-8, 2025, at Purbanchal University, Nepal, proceedings by IEEE.
3. K.Sumathi, S. Kundavai Santharam, K.Selvarani , “Smart Analytucs System for Digital Farming” , Springer international Conference on “ Data Intelligence and Cognitive Informatics, Proceedings of ICDICI 2023, held on 27-28, June 2023 organized by SCAD College of Engineering and Technology, Tirunelvelim Tamilnadu, indi, pp 181–191, ISBN : 978-981-99-7999-8, Part of the Algorithms for Intelligent Systems book series (AIS).
4. Dr.K.Sumathi,, Dr. S.Kundavai Santharam Sentiment Analysis on feedback data of E-commerce Products based on NLP, 7th international conference on “Inventive Systems and control(ICISC 2022)” held on 30-31 January , 2023, Proceedings by Springer (page nos. 362- 375) organized by JCT College of Engineering and Technology, Coimbatore.
https://link.springer.com/chapter/10.1007/978-981-99-1624-5_29 (scopus indexed)
5. K Sumathi , S Kannan, “Image Classification model using Convolution Neural Network” , INTERNATIONAL CONFERENCE ON DATA TRANSFORMATION - ICDT’23 On 20-04-23 & 21-04-23 organized by school of computing,, THE AMERICAN COLLEGE, MADURAI
6. K.Sumathi, P.Aileen Chris, “ DEEP LEARNING CNN-BASED MODEL FOR IMAGE CLASSIFICATION” , AICTE Sponsored National Conference on Innovation in Engineering and Technology , NCIET’22 organized by Department of Information Technology, Velammal College of Engineering and Technology held on 24th – 25th November, 2022
7. K.Sumathi, S. Kundavai Santharam, ANALYZING STUDENT ACADEMIC PERFORMANCE USING MS-AZURE ML STUDIO AND, “ DEVISING NAVIGATIONAL ACTIONS FOR EFFECTIVE JOB PERFORMANCE” , AICTE Sponsored National Conference on Innovation in Engineering and Technology , NCIET’22 organized by Department of Information Technology, Velammal College of Engineering and Technology held on 24th – 25th November, 2022
8. K.Sumathi, Dr.Kundavai Santharam, N.Selvalakshmi, “Data Analytics Platform for Intelligent Agriculture “presented in IEEE Confernece”, 2nd International conference

- on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC 2018), SCAD Institute of Technology, Palladam, Coimbatore, India.(Scopus Indexed)
9. Paper entitled “ Maximal Frequent Itemset Mining using Breadth First Search with Efficient Pruning “ presented in springer Confernece “ International Conference on Computer Networks and Inventive Communcation Technologies(ICCNET-2018), 26-27 April,2018 (scopus indexed)
 10. Presented Paper entitled “ Data Mining for Big Data – A Study” , Dr.K.Sumathi, Dr.S.Kannan, Mr.K.Nagarajan, two days international conference on “ Fourth International Conference on Design and Applications of Structures, Drives, Communicational and Computing Systems(ICDASDC-2015), ISBN:978-1-944171, Organized By Department of IT, K.L.N.College of I.T on 27th and 28th November 2015.
 11. Presented Paper entitled “A Meta Analysis of Affected Commercial Viabilities of business & IT based Solutions during Disaster” Ms.S.Kundavai, Dr.K.Sumathi, Mrs.N.Selvarani, two days international conference on “Managing Disaster – A Strategic Perspective” , ISBN : organized by department of MBA & PG IT, Fatima College, Madurai -18 on 29th and 30th September, 2016.
 12. Paper entitled “ Analysis of Student Dataset using Machine Learning Algorithms”, A.Srividhya, Dr.K.Sumathi in International Conference on Emerging Trends and Challenges ICETC’ 2018, organized by NPR College of Arts and Science, Natham on 28th December 2018. ISBN No: 978-81-9093444-4-2.
 13. Presented a paper entitled “presented a paper entitled “An android Application for Library Access System”, K.Prabhavathi, Gogula nandihi, Gayathri, Meenaksh, Dr.K.Sumathi, 2nd international conference on Applied and Soft Computing Techniques (ICASCT'18), organized by department of computer applications, KARE. ISBN: 9789386638274
 14. Presented a paper entitled “presented a paper entitled " E Library – A Web Application with PHP and MySQL, Guna Sekaran,Shankar Ganesh, Charleynishanth, Dr.K.Sumathi , 2nd international conference on Applied and Soft Computing Techniques (ICASCT'18), organized by department of computer applications, KARE. ISBN: 9789386638274
 15. Presented a paper entitled “Mobile Application for Student Information System”, Dr.K.sumathi, M.Umarani, P.Abinaya, international confenence on innovative trends in computer science and Applcations on 6th January 2017, ISSN:2278-1021 organized by Dept. Of CSE, pioneer College of Arts and Science, Coimbatore.
 16. Presented a paper entitled “Android Application for Student- Faculty Interaction” Dr.K.Sumathi, V.PitchaiKani, M.Rajapriya, international confenence on innovative trends in computer science and Applcations, on 6th January 2017, ISSN:2278-1021 organized by Dept. Of CSE, pioneer College of Arts and Science, Coimbatore.
 17. Maximal Frequent Itemsets Mining Algorithms - A Survey, Mrs.K.Sumathi, Dr. S.Kannan, National Conference On Emerging Trends In Information & Communication Technology” March 2011, KLNCIT, Sivagangai.
 18. A new Approach for Mining Maximal Frequent Itemset , Mrs.K.Sumathi , Dr. S.Kannan, Mr. T. Saravanan, Mr.K.Nagarajan, First International Conference on

Advanced Computer Technology, July 2011, JKKN College of Engineering & Technology, Komarapalayam -638 183. Namakkal Dt., Tamilnadu, India.

19. An Array Based Approach for Mining Maximal Frequent Itemsets, Mrs.K.Sumathi , Dr. S.Kannan, Mr.K.Nagarajan, December 2010, IEEE International Conference on Computational Intelligence and Computing Research, TCE, Coimbatore, ISBN: 978-1-4244-5966-7(**scopus indexed**)
20. A Hybrid Approach for Mining Maximal Frequent Itemset, Mrs.K.Sumathi , Dr. S.Kannan, Mr.K.Nagarajan, International conference on “Design and Applications of Structures, Drives, Communicational Systems” November 2013, ISBN: 978-93-80686-92-9, KLNCIT, Sivagangai.
21. A graph based approach for mining frequent itemset and Analysis, Mrs.K.Sumathi, Dr.S.Kannan, National Conference On Emerging Trends In Information & Communication Technology, march 2009

Lectures given/ Invited as Resource person

1. Workshop on “ Deep Learning : CNN with Python”, Organized by Department of Computer Science, Thiagarajar College, Madurai, held on 23rd February, 2023.
2. Webinar on “Supervised Machine Learning Algorithm with Python” Organized by Department of Computer Science and Application held on 31st august, 2022 at saveetha College of Liberal Arts and Science, SIMATS
3. Special Lecture on “Introduction to Machine Learning” organized by Computer science and Information Technology, The Madura College on 28-10-2021
4. Guest Lecture delivered on “Big Data and Hadoop”, to BSc(CS) students, Amman College of Arts and Science, Dindugul on 14-02.2020.
5. Guest Lecture delivered on “Python Programming – A Laconic Preamble” to BCA Students, Senthamarai College of Arts & Science, Madurai on 27-08-2018.
6. Guest Lecture delivered on “Problem Solving using Programming in C” to BCom-CA Students, Senthamarai College of Arts & Science, Madurai on 10-01-2018.
7. Special Lecture Delivered on “Flipped Classroom Model” to B.Ed Students, Arulmigu Kalasalingam College of Education on 03.02.2017
8. Guest Lecture delivered on “Data Encryption Algorithms (AES & DES)” to BCA Students, Senthamarai College of Arts & Science, Madurai on 10-02-2016.

Workshop attended:

Attended International Workshop Series on Artificial Intelligence from 23-26 November 2024, in collaboration with the UNESCO Chair & Asia Pacific University, Malaysia.

National Conference attended:

Attended National Conference on “ Enhancing the Quality of Academics and Research in HEIs”, organized by Internal Quality Assurance Cell, The American College, Madurai, on 28.01.2025.

Awards / Fellowships/Recognition:

1. Advisory Committee member, International Conference in Emerging Trends in Computer Science – ICETCS 2024, organized and hosted by Scientific Explore Publications, Madurai, Tamilnadu, India, 25th December, 2024, Virtual Mode. <https://www.sxpublication.co.in/conference/>
2. Got Elite Certificate in NPTEL Certification Course (Python for Data Science – 73%) , December 2020
3. Received NPTEL Online Exam – Mentor Certificate for Problem Solving through Programming in C Course from IIT, Madras, (Topper – First 1% , Date of Examination: 03-10-2017)
4. Got Elite Certificate in NPTEL Online course – “Programming in C++” – 83% (Date of Examination : 18-09-2016)
5. Elite +Gold Medal in NPTEL Certification course (Introduction to R Programming – 90%), 2019.
6. International Conference Reviewer, Second International Conference on Fuzzy System and Data mining (FSDM 2016, FSDM 2017, FSDM 2018, FSDM 2019, FSDM 2020,2021,2022,2023).
7. Sub Reviewer, 4th international Conference on Computational Intelligence in Pattern Recognition (CIPR 2022)