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AREAS OF EXPERTISE

Multidisciplinary Engineering

Artificial Intelligence (AI), Deep Learning, Computer Vision, Medical Imaging, IoT, Quantum Computation

EDUCATION

Ph.D 2017

Maharshi Dayanand University, Rohtak, Haryana

M.Tech. 2008

PDMCE-Bahadurgarh (Affiliated to Maharshi Dayanand University, Rohtak, Haryana)

PGDBM (equivalent to MBA by AICTE and AIU) 2005

IMS, Ghaziabad

B.Tech. 2003

NCCE-Israna, Panipat (Affiliated to Kurukshetra University, Kurukshetra)

PROFESSIONAL EXPERIENCE

Maharaja Surajmal Institute of Technology 2018 - Present

Associate Professor

New Delhi

Maharaja Surajmal Institute of Technology 2016 - 2018

Assistant Professor

New Delhi

N. C. College of Engineering 2005 - 2015

Faculty

Panipat

HONOURS AND AWARDS

Best Paper Award 2026

Awarded by: National Conference on Recent Trends in Climate Change, Energy and Sustainability

Research Excellence Award for Paper Publications 2025

Awarded by: SMES

Letter of Appreciation 2024

Awarded by: SMES

Certificate of Achievement Award for Research Paper 2024

Awarded by: ICCSM-2024

Research Excellence Award for Paper Publications 2024

Awarded by: SMES

Research Excellence Award for Patent Grant 2024

Awarded by: SMES

Research Excellence Award for Paper Publications 2024

Awarded by: SMES

Best Research Paper Award 2021

Awarded by: IRCET-2021 Conference

Recognized as SILVER Partner Faculty 2015

Awarded by: Infosys

BRONZE partner faculty under campus connect 2014

Awarded by: Infosys

Certificate of Appreciation 2014

Awarded by: NCCE

Top IBM-TGMC-Mentor 2013

Awarded by: IBM

Certificate of Recognition for outstanding contribution to Campus Connect Program 2011

Awarded by: Infosys

University Position Appreciation 2002

Awarded by: NCCE

PROFESSIONAL MEMBERSHIPS

International Association of Engineers 2020

Member

Member IACSIT 2009

Member

Member APACALL 2009

Member

Member IET 2008

Member

ISOC 2007

Global Member

COMMITTEE MEMBERSHIPS

ICCAD-2025 2025

Member-International Program Committee

ICAIA 2024 2024

Member Organizing Committee

PATENTS

System zur Vorhersage des Luftqualitätsindex auf der Grundlage des Internets der Dinge und des maschinellen Lernens (This patent is registered in Germany-Air Quality Index Prediction System Based on Internet of Things and Machine Learning)

Inventor(s): Sitender,Sangeeta,Naresh,Adeel,Amit,Savita,Sapna,Sandeep

Assignee: Maharaja Surajmal Institute of Technology, New Delhi | Published: 2022-11-04

A DIGITAL PAYMENT SYSTEM FOR TRANSACTION OF MONEY THROUGH FACE RECOGNITION AND METHOD THEREOF

Inventor(s): Dr. Amit Sharma, Dr. Vikram Bali, Dr. Sonali Mathur, Dr. Sandeep Kumar

Assignee: Dr. Amit Sharma, Dr. Vikram Bali, Dr. Sonali Mathur, Dr. Sandeep Kumar | Published: 2023-05-05

IOT ENABLED THERAPEUTIC MACHINE

Inventor(s): 1.Dr.G.Venkatakotireddy 2. Dr. C Sunil Kumar 3.Amit Sharma 4.Dr. Sandeep Kumar

Assignee: 1.Dr.G.Venkatakotireddy 2. Dr. C Sunil Kumar 3.Amit Sharma 4.Dr. Sandeep Kumar | Published: 2023-01-25

The detection of Varied EEG pattern Signal For Chronic Migraine Patients Using Machine Learning Appr

Inventor(s): 1 . DR.T.NALLUSAMY 2 . Dr. V.Kannan 3 . Felipe De Castro Dantas Sales 4 . Mr.J Logeshwaran 5 . Mr. Rajeev Ratna Vallabhuni 6 . Dr. SAYYED MATEEN 7 . Ms.M.DHARANI 8 . Mr. CH. Mohan Sai Kumar 9 . Sanjesh Kumar 10 . Mansi Singh 11 . DR. SANDEEP KUMAR 12 . PROF.DR.YEGNANARAYANAN VENKATARAMAN

Assignee: 1 . DR.T.NALLUSAMY 2 . Dr. V.Kannan 3 . Felipe De Castro Dantas Sales 4 . Mr.J Logeshwaran 5 . Mr. Rajeev Ratna Vallabhuni 6 . Dr. SAYYED MATEEN 7 . Ms.M.DHARANI 8 . Mr. CH. Mohan Sai Kumar 9 . Sanjesh Kumar 10 . Mansi Singh 11 . DR. SANDEEP KUMAR 12 . PROF.DR.YEGNANARAYANAN

AN AUTONOMOUS ROBOTIC SYSTEM FOR DEFENSE APPLICATION

Inventor(s): 1 . Aabhaas Sikka 2 . Ayush Garg 3 . Prof. Vikram Bali 4 . Prof.(Dr.) Koyel Datta Gupta 5 . Prof.(Dr.) Rinky Dwivedi 6 . Dr. Sandeep Kumar 7 . Dr. Vikrant Shokeen 8 . Dr. Amit Sharma
Assignee: 1 . Aabhaas Sikka 2 . Ayush Garg 3 . Prof. Vikram Bali 4 . Prof.(Dr.) Koyel Datta Gupta 5 . Prof.(Dr.) Rinky Dwivedi 6 . Dr. Sandeep Kumar 7 . Dr. Vikrant Shokeen 8 . Dr. Amit Sharma | Published: 2024-06-14

PUBLICATIONS

1. **Cloud Computing Security Vulnerabilites and Countermeasures**
Malik D.;Malik C.;Shokeen V.;Kumar S.;Khan M.A.
2025 IEEE 7th International Conference on Computing Communication and Automation Iccca 2025 , Vol. (2025) , pp.

2. **Enhancing Brain Tumor Segmentation using Berkeley Wavelet Transformation and Improved SVM**
Kumar S.;Singh J.;Singh P.;Diwakar M.;Gupta I.;Ravi V.;Maidin S.S.
Open Bioinformatics Journal , Vol. 18 (2025) , pp.

3. **Enhancing AI Performance in Real-Time Strategy via StarCraft II Learning**
Shokeen V.;Sharma A.;Kumar S.;Azar A.T.;Kamal N.A.;Njima C.B.
2025 International Conference on Control Automation and Diagnosis Iccad 2025 , Vol. (2025) , pp.

4. **Robust Orthonormal Subspace Learning (ROSL): A Flexible Solution for Challenging Video Surveillance Scenarios**
Kumar S.;Shokeen V.;Sharma A.;Azar A.T.;Kamal N.A.;Njima C.B.
2025 International Conference on Control Automation and Diagnosis Iccad 2025 , Vol. (2025) , pp.

5. **A Novel Model Utilizing Deep Neural Networks for Opinion Mining**
Singh J.;Gangadharan S.M.P.;Singh P.;Diwakar M.;Mall S.;Bijalwan A.;Kumar S.
International Journal of Computational Intelligence Systems , Vol. 18 (2025) , pp.

6. **ClearNet: auto-encoder based denoising model for endoscopy images**
Vikrant Shokeen; Sandeep Kumar; Vidhu Mathur; Amit Sharma; Indrajeet Gupta; Parita Jain
Indonesian Journal of Electrical Engineering and Computer Science (2025)

7. **Federated Learning Strategies for Enhancing Privacy-Preserving Euclidean Distance Matrix Computation**
Shokeen V.;Kumar S.;Sharma A.;Azar A.T.;Almutlaq S.
Engineering Technology and Applied Science Research , Vol. 15 (2025) , pp. 27768-27780

8. **EXPLORING THE ROLE OF MACHINE LEARNING IN ADVANCING THE SUSTAINABLE DEVELOPMENT AGENDA**
Dalal D.;Kumar A.;Kumar S.
Proceedings on Engineering Sciences , Vol. 7 (2025) , pp. 2433-2444

9. **ADAPTIVE MOBILE TRAFFIC FORECASTING MODEL: IMPROVED WHALE**

OPTIMIZATION BASED PREDICTION MODEL

Malik K.S.;Rohilla T.R.;Kumar S.

Proceedings on Engineering Sciences , Vol. 7 (2025) , pp. 2423-2432

10. **Design and analysis of energy aware interior gateway routing algorithm with particle swarm optimization**
Almuzaini K.K.;Stalin S.;Menon S.P.;Kumar S.;Ojo S.;Shukla P.K.;Pareek P.K.;Shukla P.K.
International Journal of Communication Systems , Vol. 38 (2025) , pp.
11. **A comparative study of brain tumor classification on unbalanced dataset using deep neural networks**
Agrawal T.;Choudhary P.;Kumar V.;Singh P.;Diwakar M.;Kumar S.
Biomedical Signal Processing and Control , Vol. 94 (2024) , pp.
12. **Utilizing Multi-layer Perceptron for Esophageal Cancer Classification Through Machine Learning Methods**
Kumar S.;Singh J.;Ravi V.;Singh P.;Al Mazroa A.;Diwakar M.;Gupta I.
Open Public Health Journal , Vol. 17 (2024) , pp.
13. **CNN-ENABLED DETECTION SYSTEM FOR AGRICULTURAL ANOMALY ANTICIPATION**
Kumar S.;Shokeen V.;Sharma A.;Sangeeta ;Sitender
Proceedings on Engineering Sciences , Vol. 6 (2024) , pp. 1947-1956
14. **Deep Learning and MRI Biomarkers for Precise Lung Cancer Cell Detection and Diagnosis**
Kumar S.;Singh J.;Ravi V.;Singh P.;Mazroa A.A.;Diwakar M.;Gupta I.
Open Bioinformatics Journal , Vol. 17 (2024) , pp.
15. **From Text to Transformation: A Comprehensive Review of Large Language Models' Versatility**
Pravneet Kaur;Gautam Siddharth Kashyap;Ankit Kumar;Md Tabrez Nafis;Sandeep Kumar;Vikrant Shokeen
arXiv (Cornell University) (2024)
16. **Integrating Radial Basis Networks and Deep Learning for Transportation**
Singh J.;Kumar S.;Ravi V.;Singh P.;Ravi P.;Diwakar M.;Gupta I.
Open Transportation Journal , Vol. 18 (2024) , pp.
17. **Network Traffic Forecasting using Adaptive Gradient Based Forecasting Model (AGBFM)**
Sandeep Kumar
ICCSM 2024 , Vol. (2024) , pp.
18. **Sustainable Waste Management through ML-based Real-Time Trash Bin Prediction**
Kumar S.;Shokeen V.;Sharma A.;Srivastava P.K.;Dugal U.;Sharma A.
Journal of Intelligent Systems and Internet of Things , Vol. 12 (2024) , pp. 65-74
19. **REEGNet: A resource efficient EEGNet for EEG trail classification in healthcare**
Khushiyaant ;Mathur V.;Kumar S.;Shokeen V.
Intelligent Decision Technologies , Vol. 18 (2024) , pp. 1463-1476
20. **From Text to Transformation: A Comprehensive Review of Large Language Models' Versatility**

Pravneet Kaur; Gautam Siddharth Kashyap; Ankit Kumar; Md Tabrez Nafis; Sandeep Kumar; Vikrant Shokeen
(2024)

21. **Meta-Learning for Real-World Class Incremental Learning: A Transformer-Based Approach**

(2024)

22. **The Power of Few: Dynamic Interaction Modeling in Few-Shot Learning Using Graph Neural Networks and Attention Mechanisms**

Shokeen V.;Kumar S.;Sharma A.;Azar A.T.;Ahmad Kamal N.;Njima C.B.

2024 International Conference on Control Automation and Diagnosis Iccad 2024 , Vol. (2024) , pp.

23. **Advancing Tunnel Construction Reliability with Automated Artificial Intelligence under Geotechnical and Aleatoric Uncertainties**

Singh J.;Singh P.;Ravi V.;Kumar S.;Diwakar M.;Al Mazroa A.;Gupta I.

Open Civil Engineering Journal , Vol. 18 (2024) , pp.

24. **Enhancing Large-Diameter Tunnel Construction Safety with Robust Optimization and Machine Learning Integrated into BIM**

Singh J.;Singh P.;Ravi V.;Kumar S.;Al Mazroa A.;Diwakar M.;Gupta I.

Open Civil Engineering Journal , Vol. 18 (2024) , pp.

25. **Integrating Radial Basis Networks and Deep Learning for Transportation**

Jagendra Singh;Sandeep Kumar;Vinayakumar Ravi;Prabhishek Singh;Pradeep Ravi;Manoj Diwakar;Indrajeet Gupta

The Open Transportation Journal (2024)

26. **Meta-learning for real-world class incremental learning: a transformer-based approach**

Kumar S.;Sharma A.;Shokeen V.;Azar A.T.;Amin S.U.;Khan Z.I.

Scientific Reports , Vol. 14 (2024) , pp.

27. **From Text to Transformation: A Comprehensive Review of Large Language Models' Versatility**

(2024)

28. **Deep Learning and MRI Biomarkers for Precise Lung Cancer Cell Detection and Diagnosis**

Sandeep Kumar;Jagendra Singh;Vinayakumar Ravi;Prabhishek Singh;Alanoud Al Mazroa;Manoj Diwakar;Indrajeet Gupta

The Open Bioinformatics Journal (2024)

29. **Design and analysis of energy aware interior gateway routing algorithm with particle swarm optimization**

Khalid Almuzaini;SHALINI STALIN;Dr. Sindhu P Menon;Sandeep Kumar;Stephen Ojo;Dr. Prashant Kumar Shukla;Piyush Kumar Pareek;Dr. Piyush Kumar Shukla

International Journal of Communication Systems (2023)

30. **Detection of Counterfeit Currency Notes Through Machine Learning Algorithms and Image Processing**

Vikrant Shokeen;Sandeep Kumar;Amit Sharma;Neha Singh;Aman Prasad;Yugank Sachdeva

31. **Soft Computing Techniques for Detecting Cyberbullying in Social Multimedia Data**
Jing Yang;Ma Haowei;Arshiya S Ansari;Sucharitha G;Batyarkhan Omarov;Sandeep Kumar;Mohammad Sajid Mohammadi;khaled alyamani
Journal of Data and Information Quality (2023)
32. **Diabetic Foot Ulcer Identification: A Review**
Das S.K.;Roy P.;Singh P.;Diwakar M.;Singh V.;Maurya A.;Kumar S.;Kadry S.;Kim J.
Diagnostics , Vol. 13 (2023) , pp.
33. **Smart Rural Structures Using IoT and Cloud Computing**
Vikrant Shokeen;Sandeep Kumar;Amit Sharma;Sonali Mathur;mohit mittal
Integration of Cloud Computing with Emerging Technologies (2023)
34. **Smart Rural Structures Using IoT and Cloud Computing**
Shokeen V.;Kumar S.;Sharma A.;Mathur S.;Mittal M.
Integration of Cloud Computing with Emerging Technologies Issues Challenges and Practices , Vol. (2023) , pp. 239-251
35. **Detection of Counterfeit Currency Notes Through Machine Learning Algorithms and Image Processing**
Shokeen V.;Kumar S.;Sharma A.;Singh N.;Prasad A.;Sachdeva Y.
Proceedings International Conference on Technological Advancements in Computational Sciences Ictacs 2023 , Vol. (2023) , pp. 1033-1039
36. **Soft Computing Techniques for Detecting Cyberbullying in Social Multimedia Data**
Jing Y.;Haowei M.;Ansari A.S.;Sucharitha G.;Omarov B.;Kumar S.;Mohammadi M.S.;Alyamani K.A.Z.
Journal of Data and Information Quality , Vol. 15 (2023) , pp.
37. **Diabetic Foot Ulcer Identification: A Review**
Sujit Kumar Das; Pinki Roy; Prabhishek Singh; Manoj Diwakar; Vijendra Singh; Ankur Maurya; Sandeep Kumar; Seifedine Kadry; Jungeun Kim
, Vol. 13 (2023)
38. **Music Genre Transfer Using TransGAN**
Kumar S.;Verghese J.;Dutta R.
Lecture Notes in Networks and Systems , Vol. 336 (2022) , pp. 851-858
39. **Music Genre Transfer Using TransGAN**
Sandeep Kumar;Jerin Verghese;Ritesh Dutta
Lecture Notes in Networks and Systems (2022)
40. **Network Security using UTM Based Firewalls**
Kumar, Sandeep
MSIT Journal of Research – SATYAM , Vol. 8 (2020) , pp. 39--42
41. **A Framework for Solving the Handwritten Equations Using OCR**
Sandeep Kumar,Akash Garg,Dharmesh Sharma, Piyush Saini
International Journal of Management, Technology And Engineering , Vol. 9 (2019) , pp. 466--471

42. Hand Gesture Recognition Based Calculator

Sandeep Kumar, Mohit Tanwar , Anand Kumar, Gita Rani, and Prashant Chamoli

International Journal of Computer Science and Mobile Computing , Vol. 8 (2019) , pp. 149--158

43. NLP: A Practical Approach

Sandeep Kumar

NLP: A Practical Approach , Vol. (2018) , pp.

44. Impact of Social Media and Customer Feedback on Online Auctions

Sandeep Kumar, Rahul Rishi

International Journal of Computational Intelligence Research , Vol. 13 (2017) , pp. 11--22

45. Hybrid dynamic price prediction model in online auctions

Kumar S.;Rishi R.

International Journal of Applied Engineering Research , Vol. 12 (2017) , pp. 98-604

46. Predictive Analysis of Online Auctions Using XGBoost

Kumar, Sandeep

International Journal for Research in Applied Science \& Engineering Technology (IJRASET) , Vol. 5 (2017) , pp. 1102--1107

47. Performance Comparison of Machine Learning Models

Kumar, Sandeep

International Journal for Research in Applied Science \& Engineering Technology (IJRASET) , Vol. 5 (2017) , pp. 1039--1044

48. Software Agents Role and Predictive Approaches for Online Auctions

Kumar, Sandeep

International Research Journal of Engineering and Technology (IRJET) , Vol. 4 (2017) , pp. 2111--2114

49. Object Detection and Recognition in Images

Sandeep Kumar, Aman Balyan, Manvi Chawla

International Journal of Engineering Development and Research , Vol. 5 (2017) , pp. 1029--1034

50. Data collection and analytics strategies of social networking websites

Kumar S.;Rishi R.

Proceedings of the 2015 International Conference on Green Computing and Internet of Things Icgciot 2015 , Vol. (2016) , pp. 643-648

51. Review on "Fuzzy Querying based on GEFRED model"

Annu Rani, Sandeep Kumar

International Journal of Engineering and Technical Research (IJETR) , Vol. 3 (2015) , pp. 100--102

52. Data collection and analytics strategies of social networking websites

Sandeep Kumar;Rahul Rishi

2015 International Conference on Green Computing and Internet of Things (ICGCIoT) (2015)

53. FRDMS For Fuzzy Querying Based On GEFRED Model

Annu Rani, Sandeep Kumar

International Journal Of Engineering And Computer Science , Vol. 4 (2015) , pp. 13887--13891

54. An Overview of Data Mining In Medical Field

Reema Arora, Sandeep Kumar

International Journal of Engineering and Technical Research , Vol. 3 (2015) , pp. 198--201

55. Performance Evaluation of DSDV & OLSR Proactive Protocols in MANET

Sandeep Kumar and others

International Journal for Scientific Research & Development , Vol. (2014) , pp. 77-80

56. BIG DATA: ADVANCEMENT IN DATA ANALYTICS

Pooja, Sandeep Kumar, Reema Gupta

Int.J.Computer Technology \& Applications , Vol. 5 (2014) , pp. 1466--1469

57. Human Factors and Ergonomics(Human Factor Re-engineering)

Sandeep Kumar

International Conference on Emerging Technologies (ICET-2014) , Vol. (2014) , pp.

58. Mobile Tracking System Using GPS

Sandeep Kumar

International Conference on Emerging Technologies (ICET-2014) , Vol. (2014) , pp.

59. Performance Evaluation of DSDV \& OLSR Proactive Protocols in MANET

Sanju Verma, Sandeep Kumar

IJSRD - International Journal for Scientific Research \& Development , Vol. 2 (2014) , pp. 2321-
-0613

60. Comparative Analysis of AODV \& AOMDV Reactive Protocols

Pooja, Sandeep Kumar, Reema Gupta

International Journal of Advanced Research in Computer Science and Software Engineering , Vol.
4 (2014) , pp. 265--270

61. Pricing Models For Online Auctions

Kumar, Sandeep

(2014) , pp. 643--648

62. Pricing Algorithms in Online Auctions

Kumar, Sandeep

International Journal of Advanced Research in Computer Science and Software Engineering , Vol.
3 (2013) , pp. 148--153

63. A Hybrid Data Mining Metaheuristic Approach for Anomaly Detection

Meenakshi, Sandeep Kumar

International Journal of Advanced Research in Computer Science and Software Engineering , Vol.
3 (2013) , pp. 1308--1317

64. Online Financial Algorithms Competitive Analysis

Sandeep Kumar;Deepak Garg

arXiv (2012)

65. Online Financial Algorithms: Competitive Analysis

Sandeep Kumar;Deepak Garg

International Journal of Computer Applications (2012)

66. Online Financial Algorithms: Competitive Analysis

Sandeep Kumar, Deepak Garg

International Journal of Computer Applications , Vol. 40 (2012) , pp. 0975--8887

67. Genetic K-Means Algorithm -- Implementation and Analysis

Sandeep Kumar, Sandhya Huria

International Journal of Mobile \& Adhoc Network , Vol. 11 (2011) , pp. 103--106

68. Genetic K Means Algorithm-Implementation and Analysis

Sandeep Kumar

National Level Conference on Innovative Computer Technologies , Vol. (2011) , pp.

69. Genetic Operators in TSP

Akash Kadiyan, Sandeep Kumar

International Journal of Modern Engineering Research (IJMER) , Vol. 1 (2011) , pp. 516--519

70. Reengineering Comparisons Using Distinct UML Tools

Sandeep Kumar

International Conference on "Emerging Trends in Engineering and Technology (IETET-2010) , Vol. (2010) , pp.

71. IT Outsourcing Featuring UML Based BPR

Sandeep Kumar

International Conference on "Emerging Trends in Engineering and Technology (IETET-2010) , Vol. (2010) , pp.

72. Impact and Relevance of GB Theory in Current Scenario

Sandeep Kumar

National Conference of Indian Society of Information Theory and Applications(ISITA) , Vol. (2009) , pp.

73. Polling Overhead Optimization In Mac

Sandeep Kumar

International Conference on Wireless Network and Embedded Systems , Vol. (2009) , pp.

74. E-Commerce

Sandeep Kumar

Annual Conference of ISITA titled Information Technology: Setting Trends in Modern Era , Vol. (2006) , pp.

75. Meta-Learning for Real-World Class Incremental Learning: A Transformer-Based Approach

Sandeep Kumar;Amit Sharma;Vikrant Shokeen;Ahmad Taher Azar;Syed Umar Amin;Zafar Iqbal Khan

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