

Name: Dr. Veenu Mangat

Designation: Professor w.e.f. Feb 2021

Co-ordinator (I.T.) w.e.f. Jan 2021

Department: University Institute of Engineering and Technology

Organisation: Panjab University, Chandigarh

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Google Scholar ID: https://scholar.google.com/citations?user=r_uKf9kAAAAAJ&hl=en

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Educational Qualifications

S. No.	Qualification	University	Year	Remarks
1.	Ph.D. (Engg. & Tech.)	Panjab University	Jan 2016	Computer Science
2.	M. E. C.S.E. (I.T.)	PEC, Panjab University	2004	1 st Position
3.	B.Tech. C.S.E.	Punjab Technical University	2002	

Research Areas: Data Mining and Big Data Analytics, Machine/Deep Learning techniques and its applications to various domains, Cloud Computing, Cyber Security, Research Methodology

Ph.D. Guidance: 4 Ongoing + 3 Degree Awarded

M.E. Guidance : 25 Degree Awarded + 1 Ongoing

Teaching Experience: 19 years

Subjects: Advanced Data Mining, Machine Learning, Database Management Systems, Business Intelligence, Big Data Analytics, Research Methodology

Sponsored Projects/Consultancy Work

S. No.	Project Title	Type of Project	Duration	Funding Amount (Rs.)
1.	Multi-Modal Framework for Monitoring Active Fire Locations and Precision in Allied Agricultural Activities using Communication Technologies	Research Project Sponsored by MeitY	2020-23	81.2 lacs
2.	AICTE SPICES	Financial grant for setting up	2022-23	4.0 lacs

		model programming club		
3.	Design and Development of Recruitment Portal	4 Technozone Solutions Pvt. Ltd.	2021	65,000
4.	Pedestrian Detection using Thermal Imaging	Sponsored by MHRD DIC	2015-18	10.75 lacs
5.	Keyword Extraction according to Domains	Consultancy from Industry: IDS Infotech Pvt. Ltd.	2018	--
6.	Document Classification	Consultancy from Industry: VT Netzwelt Solutions Pvt. Ltd.	2019	--

Patents:

S. No.	Title	Status
1.	Quick Cyber Threat Identification and Notification Using Deep Learning	Published

Ph.D. Guidance: 4 (ongoing) + 3 (awarded)

S.No.	Title	Candidate	Status
1.	Detection and Mitigation of Cloud based Distributed Denial of Service Attacks	Ms. Aanshi Bhardwaj	Awarded
2.	Design and Development of Privacy Preserving Access Framework for Location Data	Ms. Rigzin Angmo	Awarded
3.	Design of an Overlapping Community Detection Approach for Social Networks	Ms. Monika	Awarded
4.	A Deep Learning Approach for Network Based Intrusion Detection System	Ms. Divya Nehra	Synopsis Approved
5.	Dynamic provisioning of Service Function Chain in Network Function Virtualization Architecture	Ms. Karamjeet Kaur	Synopsis Approved
6.	Machine Learning for Image	Ms. Monika	Course Work

	Processing for Alzheimer Detection		
7.	Load Forecasting using Intelligent Framework	Ms. Neha Singla	Synopsis Submitted

M.E. Guidance : 25 Degree Awarded + 1 submitted

S.No.	Title	Candidate	Status
1.	IoT based network attack detection	Ms. Priyanka 2021-2023	Submitted
2.	Voice Disorder Detection using Deep Learning	Mr. Ravi Kumar 2020-2022	Degree awarded
3.	Comparative Study of Model Optimization Techniques on Covid Chest CT scan data	Mr. Jaskaran Singh 2019-2021	Degree awarded
4.	Heart Attack Prediction using Machine Learning Algorithms	Mr. Pawan 2019-2021	Degree awarded
5.	Comparative Study of Different Machine Learning Techniques to Optimally Predict the Irrigation Water Requirement in Agriculture	Mr. Himanshu 2017-2021	Degree Awarded
6.	Object Detection Based on Deep Learning	Ms. Khushaboo Gill 2016-2019	Degree Awarded
7.	Dictionary Based Sentiment Analysis of Hinglish Text	Ms. Harpreet Kaur 2015-17	Degree Awarded
8.	Motif Discovery in Time Series Data	Ms. Sukriti Parnami 2014-16	Degree Awarded
9.	User Preference Driven Offloading Scheme for Mobile Cloud Computing	Mr. Gaurav Setia 2014-16	Degree Awarded
10.	Sentiment Analysis of Hindi Tweets	Ms. Yakshi Sharma 2013-15	Degree Awarded
11.	Relevance Vector Machine Classification for Big Data	Ms. Sunaina Sharma 2013-15	Degree Awarded
12.	Hidden Markov Model Approach for Web Usage Mining	Ms. Saloni Aggarwal 2013-15	Degree Awarded
13.	Emotion Detection from Text Using Machine Learning Classifier	Mr. Rupinder Singh 2012-14	Degree Awarded

14.	An improved algorithm for Relevance Content Extraction from Web Pages	Ms. Aanshi Bhardwaj 2012-14	Degree Awarded
15.	Decoding Brain States Using Classifiers	Ms. Parneet Kaur 2012-14	Degree Awarded
16.	Network Intrusion Detection using Spiking Neural Networks	Ms. Disha Sharma 2011-13	Degree Awarded
17.	Prediction of Telecommunication Trends	Ms. Navpreet Kaur 2011-13	Degree Awarded
18.	Stock Price Prediction using Soft Computing	Ms. Savinderjit Kaur 2010-12	Degree Awarded
19.	Efficient Grouping of Web Users using Clustering Technique	Mr. Sachin Sharma 2011-13	Degree Awarded
20.	Disease Diagnosis Using Bacterial Foraging Optimization and Artificial Neural Network	Ms. Dimple Rani 2011-13	Degree Awarded
21.	Trust Management in MANETs	Ms. Savita Semplay 2010-12	Degree Awarded
22.	Text Document Classification Approach based on Particle Swarm Optimization	Ms. Stuti Karol 2009-11	Degree Awarded
23.	Performance Analysis of Attribute Selection Measures of Decision Tree Induction	Ms. Supriya 2007-09	Degree Awarded
24.	SBIRP: Swarm Based Intelligent Routing Protocol for Mobile Adhoc Networks	Mr. Sukhvir Singh 2007-09	Degree Awarded
25.	Cyber Crime and Phishing: Comparison of Machine Learning Techniques for Phishing Webpage Detection	Ms. Ruchi Bajaj 2006-08	Degree Awarded
26.	Optimized Eigenface Approach for Face Recognition	Ms. Shaveta Mehta 2006-08	Degree Awarded

Extension and Research Interaction

- **Associate Editor of ACM DTRAP** Digital Threats and Research Practice international journal (Scopus indexed)
- Chaired 3 sessions and invited as keynote speaker in IEEE sponsored national conferences

- Invited talks at various institutes like NITTTR, PEC, Dibrugarh University, etc.
- **Organizing Secretary** Chandigarh Science Congress, CHASCON 2019 for engineering sciences (130+ participants)
- **Coordinator for 3 weeks Refresher Course** in Professional Course under UGC HRDC from 5-25 Jan 2018 (45 participants)
- **Co-ordinator** for 1 week **Faculty Development Programme** on ‘Data Analytics and Big Data’ sponsored under **MHRD TEQIP II** at Panjab University in 2016 (49 participants)
- Attended training programmes at industry like Infosys, Deloitte, IDS Infotech, etc
- Attended management development programmes at IIM Bangalore, ISB Mohali, IIM Kozhikode
- Attended and organised several other short term training programmes/seminars/workshops at Panjab University
- Served as paper reviewer for many SCI indexed reputed journals such as:
 - ACM Computing Surveys SCI with IF 6.131
 - Applied Soft Computing (Elsevier) SCI expanded with IF: 4.873
 - Experts Systems with Applications (Elsevier) SCI expanded with IF: 4.292
 - Medical and Biological Engineering and Computing (Springer) SCI with IF: 2.158
 - ACM Transactions on Asian and Low Resource Language Image Processing (ACM DL) Scopus, SCImago
 - Computer Methods and Programs in Biomedicine (Elsevier) SCI with IF: 3.424
 - Concurrency and Computation (Wiley) SCI expanded with IF: 1.447
 - IETE Technical Review (IETE) SCI expanded with IF: 1.339
 - Journal of King Saud University- Computer and Information Sciences (Elsevier) ESCI
 - Knowledge and Information Systems (Springer) SCI expanded with IF 2.54
 - Current Chinese Computer Science (Bentham Science)
 - IEEE Access SCI expanded with IF 3.745

(67 verified reviews available at: <https://publons.com/researcher/3267343/dr-veenu-mangat/peer-review/>)
- Served as member of technical/review committees of conferences like IEEE RAECS 2014, Springer ICCCN 2018, MIND 2020, ICAMSE 2020, ICIIE 2020, SoMMA2020, ADCOM 2020, ICAMSE 2021, Springer CHSN 2021, MIND 2021, MIND 2022,
- Presented technical papers at premier IEEE conferences and locations like University of Berkeley, California; University of Czestochowa, Poland; University of Exeter, UK.

Awards and Honours

- Secured first position in M.E. C.S.E. (I.T.) batch 2002-04 of Panjab University

- Issued letter of appreciation by Director, Punjab Engineering College for exemplary teaching based on student feedback in 2006
- Award by Panjab University Teachers Association in 2012 for publication
- Best Research Award in Panjab University in 2015

Membership of Professional Societies

- Institution of Electrical and Electronics Engineers (IEEE), Member No. 90852027
- Association of Computing Machinery (ACM), Member No. 4118251
- International Association of Engineers (IAENG), Member No. 128373

List of Selected Publications

1. Saini, M., Mangat, V., “Multidimensional empirical analysis of overlapping community detection methods in social networks”, *Multimedia Tools and Applications*, 2023. <https://doi.org/10.1007/s11042-023-15489-5>. (SCI-E IF 2.577)
2. Karamjeet Kaur, Veenu Mangat, Krishan Kumar, “A review on Virtualized Infrastructure Managers with management and orchestration features in NFV architecture”, *Computer Networks*, Vol. 217, September 2022, pp. 109281. (SCI-E IF 4.474)
3. Angmo, R., Aggarwal, N., Mangat, V. et al. “An Improved Clustering Approach for Identifying Significant Locations from Spatio-temporal Data”, *Wireless Personal Communications*, vol. 121, No. 1, 2021, pp. 985-1009. (SCI-E IF 1.061)
doi: 10.1007/s11277-021-08668-w
4. Karamjeet Kaur, Veenu Mangat, Krishan Kumar, “A Comprehensive Survey of Service Function Chain Provisioning Approaches in SDN and NFV Architecture”, *Computer Science Review*, Vol. 38, November 2020, pp. 100298. (SCI-E IF 7.707)
5. Aanshi Bhardwaj, Veenu Mangat, Renu Vig, “Hyperband Tuned Deep Neural Network with Well Posed Stacked Sparse AutoEncoder for detection of DDoS attacks in Cloud”, *IEEE Access*, 2020, pp. 1-14. (SCI-E IF 3.745)
6. A Bhardwaj, V Mangat, R Vig, S Halder, M Conti, “Distributed denial of service attacks in cloud: State-of-the-art of scientific and commercial solutions”, *Computer Science Review*, Vol. 39, Jan 2021, pp. 100332. (SCI-E IF 7.707)
7. Veenu Mangat, Renu Vig, “Novel Association Rule Miner: Application to thoracic cancer”, *Elsevier Journal of Expert Systems with Applications*, Vol. 41, Issue 18, 2014, pp. 8234-8244. (SCI IF 4.292)
8. Veenu Mangat, Renu Vig, “Dynamic PSO Based Associative Classifier for Medical Datasets”, *IETE Technical Review*, Vol. 31, No. 4, 2014, pp. 258-265. (SCI-E IF 1.618)
9. Nidhi, Veenu Mangat, Vishal Gupta, Renu Vig, “Methods to Investigate Concept Drift in Big Data Streams”, *Knowledge Computing and Its Applications*, Vol.1, No.1, pp. 51-74, Feb 2018. Springer Nature. ISBN: 978-981-10-6679-5
10. Veenu Mangat, “Semantics based approach for efficient web page recommendations”, Oral Paper Presentation at the *15th UK Workshop on Computational Intelligence*, UKCI 2015, Exeter, 2015.

11. Veenu Mangat, “Survey on Particle Swarm Optimization based clustering techniques”, Oral Paper Presentation at the IEEE and Polish Neural Network Society sponsored 15th *International Conference on Swarm and Evolutionary Computation*, Poland, 2012.
12. Veenu Mangat, “Increasing Performance of Rule Mining in the Medical Domain Using Natural Intelligence Concepts”, in Proc. of *International Conference on Soft Computing and its Applications, IAENG WCECS 2010*, Berkeley, USA. Vol. 1, pp. 529-534.

Complete List of Journal Publications:

1. Saini, M., Mangat, V., “Multidimensional empirical analysis of overlapping community detection methods in social networks”, *Multimedia Tools and Applications*, 2023. <https://doi.org/10.1007/s11042-023-15489-5>. (SCI-E IF 2.577)
2. Karamjeet Kaur, Veenu Mangat, Krishan Kumar, “A review on Virtualized Infrastructure Managers with management and orchestration features in NFV architecture”, *Computer Networks*, Vol. 217, September 2022, pp. 109281. (SCI-E IF 4.474)
3. Karamjeet Kaur, Veenu Mangat, Krishan Kumar, “An eagle's eye view of software defined network function virtualisation”, *International Journal of Internet Technology and Secured Transactions*, vol. 12, No. 2, pp. 161-183. (Scopus)
4. Angmo, R., Aggarwal, N., Mangat, V. et al. “An Improved Clustering Approach for Identifying Significant Locations from Spatio-temporal Data”, *Wireless Personal Communications*, vol. 121, No. 1, 2021, pp. 985-1009. (SCI-E IF 1.061)
doi: 10.1007/s11277-021-08668-w
5. Karamjeet Kaur, Veenu Mangat, Krishan Kumar, “A Comprehensive Survey of Service Function Chain Provisioning Approaches in SDN and NFV Architecture”, *Computer Science Review*, Vol. 38, November 2020, pp. 100298. (SCI-E IF 7.707)
6. Aanshi Bhardwaj, Veenu Mangat, Renu Vig, “Hyperband Tuned Deep Neural Network with Well Posed Stacked Sparse AutoEncoder for detection of DDoS attacks in Cloud”, *IEEE Access*, 2020, pp. 1-14. (SCI-E IF 3.745)
7. A Bhardwaj, V Mangat, R Vig, S Halder, M Conti, “Distributed denial of service attacks in cloud: State-of-the-art of scientific and commercial solutions”, *Computer Science Review*, Vol. 39, Jan 2021, pp. 100332. (SCI-E IF 7.707)
8. Karamjeet Kaur, Veenu Mangat, Krishan Kumar, “A road to network function virtualization and applications”, *Advances in Mathematics: Scientific Journal*, Vol. 9, No. 6, 2020, pp. 4059–4066. (Scopus)
9. Khushaboo Gill, Veenu Mangat, “Comparative analysis of deep learning methods for object detection”, *Advances in Mathematics: Scientific Journal*, Vol. 9, No. 6, 2020, pp. 3759–3775. (Scopus)
10. Aanshi Bhardwaj, Veenu Mangat, Renu Vig, “Effective mitigation against IoTs using super materials for distributed denial of service attacks in cloud computing”, *Journal of Materials Today: Proceedings*, Vol. 28, No. 3, May 2020, pp. 1359-1362. (Scopus)
<https://doi.org/10.1016/j.matpr.2020.04.800>

11. Khushaboo Gill, Veenu Mangat, “Effective Deep Learning Based Architecture for Pedestrian Detection from Digital Images”, *International Journal of Engineering and Advanced Technology*, pp. 1498-1508, Vol. 9, No. 3, 2020. (Scopus)
12. Aanshi Bhardwaj, Veenu Mangat, Renu Vig, “Machine Learning Based Effective Classification of DDoS Attacks”, *International Journal of Innovative Technology and Exploring Engineering*, pp. 1060-64, Vol. 9, No. 2, 2019. (Scopus)
13. Harpreet Kaur, Veenu Mangat, Nidhi, “Dictionary Based Sentiment Analysis of Hinglish Text”, *Inderscience International Journal of Metadata, Semantics and Ontologies*, pp. 90-102, Vol. 12, No. 2/3, 2017. (Scopus)
14. Veenu Mangat, “Progression Modeling of Cognitive Disease Using Temporal Data Mining: Research Landscape, Gaps and Solution Design”, *International Journal on Future Revolution in Computer Science & Communication Engineering*, pp. 181-187, Vol. 3, No. 10, 2017.
15. Harpreet Kaur, Veenu Mangat, Nidhi, “Dictionary Based Sentiment Analysis of Hinglish Text”, *International Journal of Advanced Research in Computer Science*, pp. 816-822, Vol. 8, No. 5, 2017.
16. Chirag Huria, Gunjan, Mayank Arya, Veenu Mangat, Yogita, Roopali, “Pedestrian Detection Using Thermal Imagery and Contour Saliency Mapping”, pp. 825-829, *International Journal of Engineering Technology Science and Research*, Vol. 4, No. 6, 2017.
17. Gaurav Setia, Veenu Mangat, Raj Kumari, “Optimized Way to Migrate Tasks To The Virtual Machines Using Dynamic Approach”, *Far East Journal of Electronics and Communications*, pp. 537-551, Vol. 3, No. 2, Nov 2016. (Scopus)
18. Saloni Aggarwal, Veenu Mangat, “Importance of Domain Knowledge in Web Recommender Systems”, *International Journal of Computer Applications*, Vol. 127, No. 16, 2015, pp. 10-14. DOI: 10.5120/ijca2015906643
19. Yakshi Sharma, Veenu Mangat, Mandeep Kaur, “Sentiment Analysis and Opinion Mining”, *International Journal on Soft Computing and Artificial Intelligence*, Vol. 3, No. 1, 2015, pp. 59-62.
20. Sunaina Sharma, Veenu Mangat, “Novel RVM Approach to Structuring and Classifying Epidemic Outbreak Data”, *International Journal of Computer Applications*, Vol. 127, No. 14, 2015, pp. 40-45. DOI: 10.5120/ijca2015906588
21. Rupinder Singh, Veenu Mangat, Mandeep Kaur, “Text Emotion Detection using Neural Network”, *International Journal of Engineering Research and Technology*, Vol. 7, No. 2, 2014, pp. 153-159.
22. Aanshi Bhardwaj, Veenu Mangat, “An Improvised Algorithm for Relevant Content Extraction from Web Pages”, *Journal of Emerging Technologies in Web Intelligence*, Vol. 6, No. 2, 2014, pp. 226-230. (Scopus) DOI:10.43 04/jetwi.6. 2.226-230
23. Veenu Mangat, Renu Vig, “Novel Association Rule Miner: Application to thoracic cancer”, *Elsevier Journal of Expert Systems with Applications*, Vol. 41, Issue 18, 2014, pp. 8234-8244. (SCI-E, IF 4.292)

24. Veenu Mangat, Renu Vig, "Dynamic PSO Based Associative Classifier for Medical Datasets", *IETE Technical Review*, Vol. 31, No. 4, 2014, pp. 258-265. (SCI-E, IF 1.618)
25. Parneet Kaur, Veenu Mangat, "Decoding Brain States using Classifiers", *International Journal of Information Technology and Systems*, Vol. 3, No. 1, 2014, pp. 31-36.
26. Veenu Mangat, Renu Vig, "An Algorithm for Mining Usable Rules Using a Holistic Swarm Based Approach", *Journal of Computer Science*, Vol. 10, No. 4, 2014, pp. 585-592. (Scopus)
27. Veenu Mangat, Renu Vig, "Intelligent Rule Mining Algorithm for Classification over Imbalanced Data", *Journal of Emerging Trends in Web Intelligence*, Vol. 6, 2014. (Scopus)
28. Dimple Rani, Veenu Mangat, "Design of an efficient data classification method for disease diagnosis", *International Journal of Engineering, Business and Enterprise Applications (IJEBEA)*, Vol. 3, No. 2, 2013, pp. 100-104.
29. Sachin Sharma, Veenu Mangat, "Current Scenario of Powerful Clustering Technique", *International Journal of Software and Web Sciences (IJSWS)*, Dec 2012-Feb 2013 Issue, ISSN (Print): 2279-0063 ISSN (Online): 2279-0071.
30. Stuti Karol, Veenu Mangat, "Evaluation of a Text Document Clustering Approach Based on Particle Swarm Optimization", *CSI Journal of Computing*, Vol. 1, No. 3, 2012, pp. 27-38.
31. Veenu Mangat, "A Novel Hybrid Framework using Evolutionary Computing and Swarm Intelligence for Rule Mining in the Medical Domain", *International Journal of Computer Applications, Proceedings on International Conference on Recent Advances and Future Trends in Information Technology (iRAFIT 2012)*, iRAFIT(6), April 2012, pp. 7-13.
32. Savinderjit Kaur, Veenu Mangat, "Improved Accuracy of PSO and DE using Normalization: An Application to Stock Price Prediction", *International Journal of Advanced Computer Science and Applications, IJACSA*, Vol. 3, No. 9, 2012, pp. 197-205. (e-SCI, IF 1.324)
33. Savinderjit Kaur, Veenu Mangat, "Applications of Data Mining in Stock Market", *Journal of Information and Operations Management*, Vol. 3, No. 1, 2012, pp. 86-88.
34. Savita Semplay, Rajni Sobti, Veenu Mangat, "Review: Trust Management in MANETs", *International Journal of Applied Engineering Research*, Vol. 7, No. 11, 2012, pp. 1983-86. (Scopus)
35. Disha Sharma, Veenu Mangat, "A Novel Approach to Network Intrusion Detection using Spiking Neural Networks", *International Journal of Advanced Engineering Sciences and Technologies IJAEST*, Vol. No. 2, Issue No. 1, 2011, pp. 36-42.
36. Shveta Mehta, Veenu Mangat, "Face Recognition Using Combined PCA and Wavelet Approach", *The Journal of Computing*, Vol. 2, No. 3, 2011.

Papers in Conferences/Symposia/ Workshop:

1. Bawa, G., Sharma, A., Kumar, H., Agarwal, P., & Mangat, V. (2022), "A hybrid V2S scheme for burned area identification with agriculture fire", in proc. of the 8th

International Conference on Advanced Computing and Communication Systems, ICACCS 2022, pp. 1442-1447.

doi:10.1109/ICACCS54159.2022.9785040

2. K. Kaur, V. Mangat and K. Kumar, "Towards an Open-Source NFV Management and Orchestration Framework," in *proc. of 2022 14th International Conference on COMMunication Systems & NETWORKS (COMSNETS)*, 2022, pp. 251-255.
doi: 10.1109/COMSNETS53615.2022.9668533
3. Karamjeet Kaur, V. Mangat and K. Kumar, "Architectural Framework, Research Issues and Challenges of Network Function Virtualization," in *Proc. of the 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO)*, Noida, India, 2020, pp. 474-478.
4. Himanshu, Sukesh Sharma, Veenu Mangat, "Optimal Water Utilization Using IoT and Machine Learning in Agriculture", in *Proc. of the International Conference on Applications of AI and Machine Learning ICAML 2020*.
5. Rigzin Angmo, Veenu Mangat, Naveen Aggarwal, "Efficient Method for Selection of Quasi-Identifier for Privacy Preserving Data Mining", in *Proc. of the Springer International Conference on Computational Methods of Data Engineering ICMDE 2020*.
6. Divya Nehra, Krishan Kumar, Veenu Mangat, "Pragmatic Analysis of Machine Learning Techniques in Network Based IDS", in *Proc. of the Springer International Conference on Advanced Informatics for Computing Research*, pp. 422-430, 2019.
7. Gaurav Setia, Veenu Mangat, Raj Kumari, "User preference-driven offloading scheme for mobile cloud computing", in *Proc. of the IEEE sponsored 4th International Conference on Signal Processing and Integrated Networks (SPIN)*, pp. 524-529, March 2017.
8. Shagun Shaily, Veenu Mangat, "The Hidden Markov Model and its Application to Human Activity Recognition", in *Proc. of the IEEE sponsored Recent Advances in Engineering and Computational Sciences (RAECS)*, Dec 2015.
9. Saloni Aggarwal, Veenu Mangat, "Semantics based Approach for Efficient Web Page Recommendations", in *Proc. of the IEEE UK Symposium on Computational Intelligence*, University of Exeter, UK, September 2015.
10. Sunaina Sharma, Veenu Mangat, "Relevance vector machine classification for big data on Ebola outbreak", in *Proc. of the 1st International Conference on Next Generation Computing Technologies (NGCT)*, September 2015, Dehradun, pp. 639 – 643.
DOI: 10.1109/NGCT.2015.7375199
11. Yakshi Sharma, Veenu Mangat, Mandeep Kaur, "A practical approach to Sentiment Analysis of Hindi tweets", in *Proc. of the 1st International Conference on Next Generation Computing Technologies (NGCT)*, September 2015, Dehradun, pp. 677 – 680. DOI: 10.1109/NGCT.2015.7375207
12. Saloni Aggarwal, Veenu Mangat, "Application Areas of Web Usage Mining", in *Proc. of the 5th International Conference on Advanced Computing & Communication Technologies*, Feb 2015, Haryana, pp. 208-211. DOI: 10.1109/ACCT.2015.115
13. Sunaina Sharma, Veenu Mangat, "Technology and Trends to Handle Big Data: Survey", in *Proc. of the 5th International Conference on Advanced Computing &*

Communication Technologies, Feb 2015, Haryana, pp. 266 – 271. DOI: 10.1109/ACCT.2015.121

14. Veenu Mangat, Renu Vig, “Investigating role of interestingness measures in rule mining by embedding in novel soft computing method”, in Proc. of the *IEEE sponsored Recent Advances in Engineering and Computational Sciences (RAECS)*, March 2014, Chandigarh. Available on IEEExplore DOI : 10.1109/RAECS.2014.6799623
15. Aanshi Bhardwaj, Veenu Mangat, “A Novel Approach for Content Extraction form Web Pages”, in Proc. of the *IEEE sponsored Recent Advances in Engineering and Computational Sciences (RAECS)*, March 2014.
16. Parneet Kaur, Veenu Mangat, “Research issues and Mining Techniques in Brain Informatics”, in Proc. of the *IEEE International Advance Computing Conference*, Feb 2014, Gurgaon, pp. 590-594.
17. Sachin Sharma, Veenu Mangat, “Clustering in User information Retrieval on Web”, in Proc. of the *International Symposium on Computational and Business Intelligence, ISCBI*, August 2013, pp. 287-290.
18. Veenu Mangat, Renu Vig, “Hybrid Miner: Effective Rule Mining based on a Hybrid Dynamic Swarm Method”, in Proc. of the *15th International Conference on Artificial Intelligence, ICAI*, Las Vegas, July 2013, pp. 232-238.
19. Sachin Sharma, Veenu Mangat, “Efficient Grouping of Web Users Using Clustering Technique”, in Proc. of the *4th International Conference on Recent Trends in Information, Telecommunication and Computing, ITC* 2013.
20. Dimple Rani, Veenu Mangat, “An Efficient Technique for Disease Diagnosis Using Bacterial Foraging optimization and Artificial Neural Network”, in Proc. of the *International Symposium on Computational and Business Intelligence, ISCBI*, August 2013, pp. 100-106. DOI:10.1109/ISCBI.2013.75
21. Veenu Mangat, “Survey on Particle Swarm Optimization based clustering techniques”, Oral Paper Presentation at the IEEE and Polish Neural Network Society sponsored *15th International Conference on Swarm and Evolutionary Computation*, Poland, 2012.
22. Veenu Mangat, “Increasing Performance of Rule Mining in the Medical Domain Using Natural Intelligence Concepts”, in Proc. of *International Conference on Soft Computing and its Applications, IAENG WCECS 2010, Berkeley, USA*. Vol. 1, pp. 529-534.

Books/Book Chapters Published:

1. Karamjeet Kaur, Sukhveer Kaur, Krishan Kumar, Naveen Aggarwal, Veenu Mangat (2022). Mininet-WiFi as Software-Defined Wireless Network Testing Platform. In: Krishan Kumar, Sunny Behal, Abhinav Bhandari, Sajal Bhatia (eds) *Security and Resilience of Cyberphysical Systems*, 1st edition, Chapman and Hall/CRC. ISBN: 9781003185543 <https://doi.org/10.1201/9781003185543>
2. Kumar, P., Mangat, V., Monika (2023). Review of Different ML Techniques Used for Heart Disease Prediction. In: Choudrie, J., Mahalle, P., Perumal, T., Joshi, A. (eds) *ICT with*

Intelligent Applications. Smart Innovation, Systems and Technologies, vol 311. Springer, Singapore. https://doi.org/10.1007/978-981-19-3571-8_1

3. Kaur K., Mangat V., Kumar K. (2021) A Study of OpenStack Networking and Auto-Scaling Using Heat Orchestration Template. In: Singh B., Coello Coello C.A., Jindal P., Verma P. (eds) Intelligent Computing and Communication Systems. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-16-1295-4_18

4. Nehra D., Mangat V., Kumar K. (2021) A Deep Learning Approach for Network Intrusion Detection Using Non-symmetric Auto-encoder. In: Singh B., Coello Coello C.A., Jindal P., Verma P. (eds) Intelligent Computing and Communication Systems. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-16-1295-4_38

ISBN: 978-981-16-1294-7

5. Bhardwaj A., Mangat V., Vig R. (2021) Hybrid Deep Neural Architecture for Detection of DDoS Attacks in Cloud Computing. In: Paprzycki M., Thampi S.M., Mitra S., Trajkovic L., El-Alfy ES.M. (eds) Intelligent Systems, Technologies and Applications. Advances in Intelligent Systems and Computing, vol 1353. Springer, Singapore. https://doi.org/10.1007/978-981-16-0730-1_5

ISBN: 978-981-16-0729-5

6. Kansal, H.K., Singh, S.B., Mangat, V., Rattan, M., Kumar, S. (Eds), IOP Conference Series: Materials Science and Engineering, 2021, 1033(1), 011001.

7. Dr. Munish Jindal, Dr. Veenu Mangat, Dr. Krishan Saluja, Dr. M.K. Jindal, Ms. Harmandeep Kaur, UGC-NET/JRF/SET: Computer Science and Applications (Paper II), 1st edition, DPS Publishing House, 2021. ISBN: 978-93-90157-20-4

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