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Brief Bio Sketch

In a career that spans more than two and a half decades, I worked as a software analyst in my early years and later as a teacher and researcher. I have taught a varied array of courses at post-graduate and under-graduate level including Database Management Systems, Operating Systems, and Document Preparation & Presentation Software in the recent years. My current focus in research is in the area of soft computing. At present, I am interested in the areas of Scientometrics, Social Network Analytics, Quantum-inspired computing, Bioinformatics, Educational technology, and Process mining.

Education

Ph.D. "Community Detection in Social Networks: A Quantum-inspired Evolutionary Approach"	University of Delhi, Delhi, India	2017
M.Phil. "Rule Mining Using Formal Concept Analysis"	Madurai Kamraj University, Madurai, India	2009
Master of Computer Applications	University of Delhi, Delhi, India	1997
B.Sc. (H) Statistics	University of Delhi, Delhi, India	1994

Employment History

S.S. College of Business Studies, University of Delhi, India	
Professor, Computer Science	
Professor, Computer Science	February 2024 till date
Associate Professor, Computer Science	January 2016 – January 2024
Assistant Professor, Computer Science	January 2002- December 2015
XRT-CERG Inc., PA, USA	
System Analyst	1998-2001
HCL-Technologies, Noida	
Software Analyst	1997

Awards

I am a recipient of academic awards during under-graduate and post-graduate studies including the University Post-Graduate Scholarship from 1994-1996. I have also received a performance award in the year 2000 while working as a software analyst in XRT-CERG America, PA, USA.

Supervision (jointly with Prof. Naveen Kumar, University of Delhi)

Doctoral Thesis

Sonia Deshmukh, Discovery and Evaluation of Process Models from Event Log. Awarded 2024. Jointly with Sr. Prof. Naveen Kumar.
Ishwar Kaur, Knowledge Discovery. Under progress. Jointly with Prof. Priya Gupta.

M.Sc. Projects (Major)

2015-16. Neha Gupta and Sonam Sonali. Sentiment Analysis of Citation Contexts.
2014-15. Isha Singhal, Stuti Mittal. Community Detection in Social Networks
        Tamanna Gupta. Conference Ranking Using Eigenfactor and SJR2.
        Barkha Khatri. Community Detection in Multidimensional Networks.
2013-14. Archi Mittal, Swati Gogia. Community Detection in Complex Networks Using Sequential and Parallel Quantum-inspired Evolutionary Algorithm- Implementation.
2012-13. Ankit Tripathi, Sheetal Taneja, Monica Bisla. Community Detection in Large Complex Networks and Facility Location Problem.
2011-12. Kritika Shrivastava, Priyamvada Sharma. Application of Machine Learning in Speech Processing.

Invitation

2020. Invitation as a judge for Science Colloquium at Shaheed Rajpal D.A.V. Public School, Dayanand Vihar, Delhi

Member/Reviewer in Conference or Journal

- 2024. Member, Technical committee, International Conference Cognitive Robotics and Intelligent Systems
- 2023. Reviewer, Business Process Management Journal (BPMJ), Emerald Publishing
- 2023. Reviewer, Journal of Infrastructure, Policy and Development (JIPD), EnPress Journals
- 2023. Editor, Recent Research Reviews journal, IRO Journals
- 2023. Member, Technical committee, International Conference on Intelligent IoT Operating Networks and Blockchain
- 2023. Member, Technical committee, International Conference on Cognitive Machine Learning Systems
- 2022. Reviewer, Soft Computing, Springer
- 2021. Reviewer, Successful Teaching Strategies for Culturally and Linguistically Diverse International Students, IGI Global
- 2020. Reviewer, International Conference on Big data Analytics
- 2019. Reviewer, International Communication and Community Development Conference
- 2018. Reviewer, Journal of Parallel and Distributed Computing
- 2015. Reviewer, International Conference on Big data Analytics
- 2014. Member, Organizing Committee, International Conference on Big data Analytics
- 2014. Reviewer, International Conference on Big data Analytics
- 2012. Member, Organizing Committee, International Conference on Big data Analytics

Publications List

Research Articles: Published in Journals

Deshmukh, S., Gupta, S. & Kumar, N. (2024). Multi-objective Binary Differential Approach with Parameter Tuning for Discovering Business Process Models: MoD-ProM. The Scientific World Journal, 2024(1), 9545184. https://doi.org/10.1155/2024/9545184 *SCOPUS Indexed*

Gupta, A., Gupta, S., Das, S., Prakash, A., Garg, K. & Sarkar, S. (2024). Using Historical Values and Social Media Sentiments to Predict Bitcoins and Altcoins Prices with Time Series Models-A Comprehensive Survey. Journal of Engineering Science & Technology Review, 17(4), 136-144. https://doi.org/10.25103/jestr.174.16 *SCOPUS Indexed*

Bansal, R., Gupta, S., Shankar, R.K. & Arundhati. (2024). Exploring Artificial Intelligence PEAS Framework for Enhanced Decision-Making. Recent Research Reviews Journal, 3(2), 397-409. https://doi.org/10.36548/rrrj.2024.2.007

Gupta, S., Bansal, R., Arundhati, Shankar, R.K. (2024). Unveiling the Ethical Challenges of Artificial Intelligence. International Journal of Interdisciplinary and Multidisciplinary Studies, 12(2), 21-33.

Gupta, S. & Kumar, A. (2024). Sentiment-aware Enhancements of Pagerank-based Citation Metric, Impact Factor, and H-index for Ranking the Authors of Scholarly Articles. Computer Science-AGH Journal, 1-34. https://doi.org/10.7494/csci.2024.25.2.6042 *IF 0.5, SCOPUS, ESCI indexed*

Agarwal, S., Gupta, S., & Raj, R. (2024). Identification of Potential Targetable Genes in Papillary, Follicular, and Anaplastic Thyroid Carcinoma Using Bioinformatics Analysis. Endocrine Journal, 1-13. https://doi.org/10.1007/s12020-024-03836-x *IF 3.7, SCOPUS, SCIE Indexed*

Gupta, A. & Gupta, S. (2024). Enhanced Classification of Imbalanced Medical Datasets using Hybrid Data. International Research Journal of Multidisciplinary Technovation, 58-76. https://doi.org/10.54392/irjmt2435 *SCOPUS indexed*

Gupta, S., Deshmukh, S., & Kumar, N. (2024). MantaRay-ProM: An efficient process model discovery algorithm. AI Communications, 1-20. https://doi.org/10.3233/AIC-220219 *IF 0.8, SCOPUS, SCIE Indexed*

Gupta, P., Gupta, S. & Kumar (2024). DMRFO-CD: A Discrete Manta Ray Foraging-inspired Optimization Algorithm for Community Detection in Networks. International Journal of Computational Science and Engineering, 1-16. https://doi.org/10.1504/IJCSE.2024.10063171 *IF 2.0, SCOPUS, ESCI indexed*

Gupta, S. & Kumar, N. (2024). A Quantum Evolutionary Algorithm Inspired by Manta Ray Foraging Optimization. International Journal of Computational Science and Engineering, 1-11. https://doi.org/10.1504/IJCSE.2024.10062570 IF 2.0, *SCOPUS, ESCI indexed*

Tomar, S., Arundhathi, A., Gupta, S., & Sharma, M. (2024). Digital assessment: impact on student motivation, peer learning, group dynamics. Journal of Education and Learning (EduLearn), 18(1), 9-17. https://doi.org/10.11591/edulearn.v18i1.21138 SCOPUS indexed

Gupta, S., Tomar, S., & Gupta, A. (2023). Learner-generated YouTube presentations for formative assessment. STEM Education, 3(4), 306-330. https://www.doi.org/10.3934/steme.2023019 *SCOPUS indexed*

Gupta, S., & Gupta, P. (2023). Parameter Tuning of Coronavirus Herd Immunity Optimizer for Detection of Communities in Social Networks. Advances in Artificial Intelligence and Machine Learning. 3(4). 1728-1742. https://dx.doi.org/10.54364/AAIML.2023.1199 *SCOPUS, ESCI indexed*

Gupta, A., Gupta, S., Bisht, M., Hooda, P., & Salik, M. (2023). Document Co-citation Analysis using Concept Lattice. Engineering, Technology & Applied Science Research, 13(5), 11837-11842. https://doi.org/10.48084/etasr.6201 *IF 1.5, SCOPUS, ESCI indexed*

Gupta, S., Kumar, N., & Bhalla, S. (2023). Citation metrics and evaluation of journals and conferences. Journal of Information Science, 01655515231151411. https://doi.org/10.1177/01655515231151411 *IF 2.4. SCOPUS, SCIE Indexed*

Gandhi, N., Bedi, M., Bhardwaj, P., Kaura, H., Baliyan, K., & Gupta, S. (2022). A Comprehensive Survey on Covid-19 Prediction Models. Vivekananda Journal of Research, 12(2), 142-167.

Gupta, P., & Gupta, S. (2022). Deep Learning in Medical Image Classification and Object Detection: A Survey. International Journal of Image Processing and Pattern Recognition, 8(2), 1-15. https://doi.org/10.37628/ijippr.v8i2.846

Deshmukh, S., Agarwal, M., Gupta, S., & Kumar, N. (2020). MOEA for discovering Pareto-optimal process models: an experimental comparison. International Journal of Computational Science and Engineering, 21(3), 446-456. https://doi.org/10.1504/IJCSE.2020.106067 *IF 2.0, SCOPUS, ESCI indexed*

Gupta, S., Mittal, S., Gupta, T., Singhal, I., Khatri, B., Gupta, A. K., & Kumar, N. (2017). Parallel quantum-inspired evolutionary algorithms for community detection in social networks. Applied Soft Computing, 61, 331-353. https://doi.org/10.1016/j.asoc.2017.07.035 *IF 8.7, SCOPUS, SCIE Indexed*

Book Chapters: Published

Gupta, S. & Gupta, S. (2022). Massive Open Online Courses: Promoting Intercultural Communication. Handbook of Research on Teaching Strategies for Culturally and Linguistically Diverse International Students, IGI Global, 289-305.

Gupta, S., Taneja, S. & Kumar, N. (2018). Redefining the classroom: Integration of open and classroom learning in higher education. Online Course Management: Concepts, Methodologies, Tools, and Applications, IGI Global, 693-708. SCOPUS Indexed

Gupta, S., Taneja, S. & Kumar, N. (2015). Redefining the classroom: Integration of open and classroom learning in higher education. Macro-level learning through massive open online courses (MOOCs): Strategies and predictions for the future, IGI Global, 168-182. *SCOPUS Indexed*

Gupta, A., Gupta, S. & Kumar, N. (2009). Mining Frequent Closed Itemsets for Association Rules. Encyclopedia of Artificial Intelligence, IGI Global, 537-546.

Research Papers: Published in Conferences

Deshmukh, S., Gupta, S., Kumar, N. (2022). GA-ProM: A Genetic Algorithm for Discovery of Complete Process Models from Unbalanced Logs. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), vol. 13167, Springer, 209-218. *SCOPUS indexed*

Deshmukh, S., Gupta, S., Varshney, S. & Kumar, N. (2021). A Binary Differential Evolution Approach to Extract Business Process Models. Soft Computing for Problem Solving: Proceedings of SocProS 2020, vol. 1, 1392(9), Springer, 279-290.

Deshmukh, S., Agarwal, M., Gupta, S. & Kumar, N. (2018). Discovering pareto-optimal process models: a comparison of MOEA techniques. In Proceedings of the Genetic and Evolutionary Computation Conference Companion, 286-287. *H-index 32, SCOPUS indexed*

Gupta, S., Khatri, B., Gupta, T. & Kumar, N. (2015). Modified partition integration method for community detection in multidimensional social networks. In Proceedings of 11th International Conference on Natural Computation (ICNC), IEEE, 1188-1195. *H-index 18, SCOPUS indexed*

Gupta, S., Taneja, S. & Kumar, N. (2014). Quantum inspired genetic algorithm for community structure detection in social networks. In Proceedings of the 2014 Annual Conference on Genetic and Evolutionary Computation, 1119-1126. H-index 32.

Gupta, S., & Kumar, N. (2014). Gpu-based massively parallel quantum inspired genetic algorithm for detection of communities in complex networks. In Proceedings of the Companion Publication of the 2014 Annual Conference on Genetic and Evolutionary Computation, 163-164. *H-index 32, SCOPUS indexed*

Gupta, S. & Kumar, N. (2014). Parameter tuning in quantum-inspired evolutionary algorithms for partitioning complex networks. In Proceedings of the Companion Publication of the 2014 Annual Conference on Genetic and Evolutionary Computation, 1045-1048. *H-index 32, SCOPUS indexed*

Books: Published

Gaur, H., & Gupta, S. (2024). Analytics With Python. Authorspress. ISBN 978-93-6095-236-5. Link: https://amzn.in/d/6DjOwy9

Gupta, P., Pathak, S., & Gupta, S. (2024). Essentials of Python. Authorspress. ISBN 978-93-6095-601-1. Link: https://amzn.in/d/a0lurg0

Presentations and Invited Lectures

2023. Information Technology Skills: An overview. 4-week Skill enhancement/ training program for AR, AO, senior officials, University of Delhi, Delhi. December 13.

2019. MOOCs: Promoting International Communication. International Communication and Community Development Conference, Notre Dame Seishin University, Okayama, JAPAN, 8-20. November 16-17

2014. Measuring Impact of Conferences. Work-in Progress Symposium (WIPS, BDA conference), Dept. of Computer Science, University of Delhi, Delhi. December 17.

2012. Higher education – A paradigm shift towards integration of traditional and online education. Academic Congress, University of Delhi, Delhi. September 6