


# SHYAM LAL COLLEGE (EVE.) UNIVERSITY OF DELHI Faculty Proforma



Title	<b>Ms.</b>	First Name	<b>Sonia</b>	Last Name	<b>Singh</b>	Photograph
Designation	<b>Assistant Professor</b>					
Email	<a href="mailto:ssingh@shyamlale.du.ac.in">ssingh@shyamlale.du.ac.in</a> , <a href="mailto:14sonia.singh@gmail.com">14sonia.singh@gmail.com</a>					
Educational Qualifications						
Degree	Institution					Year
Ph. D	<b>Manav Rachna International Institute of Research and Sciences</b>					(Pursuing) Thesis Submitted.
PG (M. Sc) Computer Science	<b>Department of Computer Science, North Campus, University of Delhi</b>					<b>2012</b>
UG (B. Sc(H)) Computer Science	<b>Acharya Narendra Dev College, University of Delhi</b>					<b>2010</b>
Career Profile						
<ul style="list-style-type: none"> <li><b>Assistant Professor (Ad-hoc), Dept. of Computer Science, Shyam Lal Evening College from Aug 2014 to Till Date.</b></li> <li><b>Assistant Professor (Ad-hoc), Dept. of Computer Science, Shaheed Rajguru College of Applied Sciences for Women. (Jan 2014 to May 2014).</b></li> </ul> <p><b>I am a successful Computer Science teacher with more than 11 years of professional teaching experience in University of Delhi.</b></p> <p><b>Pursuing Ph.D. to attain a higher state of knowledge.</b></p>						
Administrative Assignments						
<ul style="list-style-type: none"> <li>Working as a member of Women Development cell, a committee of college.</li> <li>Working as a member of Ambedkar Study circle, a committee of college.</li> <li>Working as a member of Sanjeevani (BAP), a committee of college.</li> <li>Working as a member of Computer Software and Website committee of college.</li> <li>Working as a member of NSS committee of college.</li> <li>Worked as a member of Art, Drama and Cultural committee of college and perform my duties on time.</li> </ul>						

<ul style="list-style-type: none"> <li>• Worked as a member of Skill Development cell committee of college.</li> <li>• Worked as a member of Gandhi Study Circle committee of college.</li> <li>• Worked as a member of NSS committee of college.</li> <li>• Worked as a convenor for the admission of BA (SC+ST) committee.</li> <li>• Worked as a member Website committee of college.</li> <li>• Worked as a member of APC committee of college.</li> <li>• Preparing NAAC reports For Department</li> <li>• Organizer of Various events to enhance students' knowledge in the college at the departmental level.</li> <li>• Organizer of Various Seminars in the college at the departmental level.</li> <li>• Organizer of Various "TALKS" from special invitees in the college at the departmental level.</li> <li>• Arrange Sponsors for the departmental Fest of Computer Science Department.</li> </ul>
<b>Areas of Interest / Specialization</b>
<ul style="list-style-type: none"> <li>• Internet of Things.</li> <li>• DBMS</li> <li>• Data Mining</li> <li>• Operating System</li> </ul>
<b>Subjects Taught</b>
<ol style="list-style-type: none"> <li>1. Sports for Life in VAC</li> <li>2. Ayurveda and Nutrition in VAC</li> <li>3. Data Mining I and Data Mining-II for BAP NEP</li> <li>4. Operating System to BAP Programme NEP</li> <li>5. Data Interpretation and Visualization in Python to BAP Programme NEP</li> <li>6. Python Programming to BA Programme</li> <li>7. CNIT to BA Programme</li> <li>8. DBMS to BA Programme</li> <li>9. OSS to BA Programme</li> <li>10. Office Automation Tools to BA Programme</li> <li>11. Information Security to BA Programme</li> <li>12. Introduction to Python to GE(H)</li> <li>13. DBMS to GE(H)</li> <li>14. CNIT to GE(H)</li> <li>15. Computer Networks</li> <li>16. DIP(Teaching)</li> <li>17. DAA(Teaching)</li> </ol>
<b>Publications Profile</b>
Published more than 12 papers in reputed journals and conferences.

## Publications

1. Singh, S., & Gupta, N. (2024). Enhancing Quality of Service in Wireless Sensor Networks Through a Routing Algorithm Based on Self-Organizing Maps. *Advances in Artificial Intelligence and Machine Learning*, 4(2), 2338–2357. ISSN: 2582-9793.
2. Singh, S., & Gupta, N. (2024). An Augmented Fuzzy C-Means Algorithm for Efficient Data Clustering in IoT-Enabled Wireless Sensor Networks. *Nanotechnology Perceptions*, 20(S8), 821–838. ISSN: 1660-6795.
3. Singh, S., & Gupta, N. (Accepted). Hybridization of Centralized and Decentralized Clustering using Fuzzy C-Means and Spectral Partitioning. *Kufa Journal of Engineering*. ISSN: 2071-5528.
4. Singh, S., & Gupta, N. (2024, November). The Role of IoT in Enhancing Wireless Sensor Network Applications: A Comprehensive Analysis. *Proceedings of the IEEE Conference*, 2024
5. Singh, S., & Gupta, N. (2023). Empirical Study of Energy-Efficient Routing Protocol for Internet of Things. *Proceedings of the IEEE International Conference on Advanced Innovations in Communication and Information Technology (ICAICCIT)*, 2023, Record No. #60255.
6. Singh, S., & Gupta, N. (2023). Emerging QoS Strategies: A Comprehensive Overview of Clustering Techniques in IoT-Equipped WSNs. *Proceedings of the IEEE International Conference on Advanced Innovations in Communication and Information Technology (ICAICCIT)*, 2023, Record No. #60255.
7. (2022). Challenges of Integration of Blockchain into Internet of Things (IoT): A Survey. *Proceedings of the International Conference on Frontiers of Science and Technology*, 2022, Volume 259, 060004.
8. (2022). Understanding the Public, Private and Consortium Consensus Algorithms in Blockchain Technology. *International Journal of Blockchains and Cryptocurrencies*, 3(2), 269–288. ISSN: 2516-6425.
9. Research Paper Published in "IME JOURNAL (ISSN No.: 0974-0716) (Volume VIII, No. 2, July 2014)" entitled "EVALUATING THE ID3 DECISION TREE ALGORITHM IN WEKA".
10. Paper Published in "International Journal of Advanced Information Science and Technology (IJAIST), ISSN: 2319-2682. Vol. 27 No. 27, July 2014", entitled "COMPARATIVE STUDY OF ID3, CART AND C4.5 DECISION TREE ALGORITHM: A SURVEY".
11. Paper published in "International Journal of Computer Science and Information Technologies, Vol. 5(4), 2014, 5068-5070" entitled "ISSUES IN MOBILE E-COMMERCE: A SURVEY".

12. Paper published in “International Journal of Advanced Research in Computer Science and Software Engineering, Volume 8, ISSN: 2277-1280, Issue 8 Aug 2014 Entitled “Image Encryption based on Arnold Cat Map and S-Box”

#### Awards and Distinctions

##### **A. Faculty Development Programmes**

1. Successfully completed the Faculty Development Programme (FDP) on "NEP Orientation & Sensitization Programme", organized by CPDHE, UGC-MMTTC, University of Delhi, held from 18th September to 27th September 2024.
2. Successfully completed a One Week Faculty Development Programme on "Open-Source Tools for Research" from June 08 - June 14, 2020 from Teaching Learning Centre Ramanujan College, University of Delhi, Sponsored by Ministry of Human Resource Development, Government of India, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching.
3. Successfully completed a One-week (Online) Faculty Development Programme on “Online Teaching Platforms” from August 10-17, 2020 organized by Computer Software and Website Committee, Shyam Lal College (Eve.), University of Delhi.
4. Successfully completed a One-week (Online) Faculty Development Programme on “BLOCKCHAIN TECHNOLOGIES AND APPLICATIONS (BCT-2020)” organized by Department of Computer Science & Engineering and Information Technology, Noida from Dec 28, 2020-Jan 2, 2021.

##### **B. Webinars**

1. Participated in the Webinar on “Intellectual Property Rights in Traditional Knowledge and Biodiversity” organized by Internal Quality Assurance Cell (IQAC) in collaboration with Department of Philosophy, Mata Sundri College for Women, University of Delhi on May 9th, 2020 through Google Meet.
2. Participated in webinar on topic "COVID-19, Impact and Strategies for Education and Challenges in Virtual Learning" organized by Department of Computer Science, Shri Guru Gobind Singh College for Commerce in collaboration with IQAC, University of Delhi, India on 12th May, 2020
3. Participated in webinar on topic “Role of Mathematics in Covid-19: Existing literature, Outcomes, and Challenges in various direction” organized by ARSD College, Dhaula Kuan held on 14 th May, 2020.
4. Participated in webinar on topic “E- content: Design and Delivery” organized by ARSD College, Dhaula Kuan held on 15th May, 2020.

5. Participated in webinar on topic “Engendering Migration during COVID crisis: Reflections” organized by ARSD College, Dhaula Kuan held on 15 th May, 2020.
6. Participated in the webinar on the topic “Current Trends in Information Technology” organized by Department of Computer Science in Collaboration with Department of Mathematics, Bharati College, University of Delhi on 15th May 2020.
7. Participated in webinar on topic “Real Education of Geniuses” organized by ARSD College, Dhaula Kuan held on 16 th May, 2020.
8. Participated in Webinar on “Emerging Trends in Cyber Security” organized by “Centre for Training & Development (CTD) (An initiative of URAN Foundation-Reg No: 1550/2020”, Under society registration act XXI of 1860, Govt of India) on 17 th May, 2020.
9. Participated in webinar on topic “Mind management Mantras: Art of living” organized by ARSD College, Dhaula Kuan held on 17 th May, 2020.
10. Participated in webinar on topic "LEADERS AS COMMUNICATOR" organized by Department of Computer Science, Bharati College, University of Delhi, India on 20th May, 2020.
11. Participated in webinar on topic “Artificial Intelligence” organized by ARSD College, Dhaula Kuan held on 29 th May, 2020.
12. Participated in International Webinar Session on “Network-Based Approaches to Explore the Biological Data” on 24th July 2020 organized by Department of Computer Science, Maitreyi College, University of Delhi, India.

### **C. Workshops**

Participated in a workshop on the topic “Google Classroom: Teaching, Learning and Managing” organized by the Department of Computer Science, Swami Shraddhanand College, University of Delhi on May 24, 2020.

### **Other Activities**

- Part of many committees at college level and always complete the given assignments on time.

Signature of Faculty Member