

Curriculum Vitae (Updated Jan 2024)

Name **Dr. Nidhi Arora**

Designation Associate Professor

Department Computer Science

Address (Official) Kalindi College, University of Delhi,
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India

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Educational Qualifications

Subject	Institution	Year	Details
Ph.D. (Computer Science) Thesis Title " <u>Enhancing Group Search Optimization Algorithm for Structural Analysis of Small Scale Networks</u> "	Department of Computer Science, University of Delhi	Awarded in June 2019	Under the Guidance of Prof Hema Banati, Dyal Singh College, University of Delhi
M.Phil (Computer Science) Thesis on " <u>Survey of Algorithms for Identification of Transcription Modules in Microarray Data</u> "	Madurai Kamaraj Univ, Madurai	Awarded in 2010	First Division
Masters of Computers Applications(MCA)	MD Univ, Rohtak.	2004	First Division
Masters in Information Technology (MIT)	MCRP Univ, Bhopal	2001	First Division
B.Sc. (Comp. Sc.)	Keshav Mahavidyalaya, University of Delhi	1999	First division

Career Profile

Total Teaching Experience: (2001 – till date)- 22+ years

Organisation	Designation	Duration	Role
Kalindi College	Associate Professor	23 rd August 2018- till date	Teaching, Research and Administrative Activities
Kalindi College	Senior Assistant Professor	23 rd August 2015- 22 nd August 2018	Teaching, Research and Administrative Activities
Kalindi College	Assistant Professor - Permanent	23 rd August 2010- 22 nd August 2015	Teaching, Research and Administrative Activities
Keshav Mahavidyalaya, DU	Assistant Professor(Adhoc)	1 st Nov 2001 to 23 rd August 2010	Teaching

Research Interests/Specialization

Evolutionary Algorithms, Social Networks, Machine Learning, Data Structures, Deep Learning, C++.

Administrative Assignments / Contribution to corporate life

2023-24	1. Convener : College Time Table committee, MIS Committee
2022-23	2. Convener : College Time- Table Committee , E-Waste Committee , Repository Committee 3. Member : College Fund Allocation committee
2021-22	1.Convener : E-waste disposal committee 2.Convener : MIS committee, till Jan 2022 3.Advisor : MIS committee- Feb 2022 onwards 4.TIC- computer science department : 2021-22 5. Convener : Repository committee 6. Convener , Technical committee , Annual day June- 2021 7. Committee member : selection of College counsellor 8. Member of committee of Faculty of Mathematical science, University of Delhi. 2021-22
March 2020- 2021	<ul style="list-style-type: none"> • Teacher In charge, Department of Computer Science, Kalindi College, March 2020 onwards • Nodal Officer, OBE, August 2020- October 2020. • Convener- Criteria 4, NAAC committee 2020. • Convener- Technical Committee, Orientation Day 20-21 • Convener- Technical Committee, Annual day 2019-20 • Convener- National level FDP on "Moving Towards New Normal with Effective Online Teaching"" Organised by Department of Computer Science, Kalindi College held on 1st -7th December, 2020.
2018-19	<ul style="list-style-type: none"> • Deputy Co-Ordinator, Central Evaluation Centre, Kalindi College (May-September 2018) • Member of Committee of Undergraduate Courses, Department of Computer science, University of Delhi. • Convenor, Cultural Program, Farewell 2019
2013-2014, 2017	<ul style="list-style-type: none"> • Member, Purchase Committee
2017-19	<ul style="list-style-type: none"> • Convenor, E-waste Committee • Co-Convenor, Repository Committee
2014	<ul style="list-style-type: none"> • Member, Core Committee, Admissions • Convenor, ECA admission Committee • Superintendent, Written+ Skill Test, JACT(Contract), Kalindi College
2012-13	<ul style="list-style-type: none"> • Convenor, Cultural programme, Annual Day
2013	<ul style="list-style-type: none"> • Co-Convenor, ECA admission committee
6th Aug 2012-20th Nov 2012	<ul style="list-style-type: none"> • Teacher-In-Charge, Department of Computer Science, Kalindi College
1st May 2013-30th July 2014	
2012,2013, 2014,2018,2019	<ul style="list-style-type: none"> • Convenor, Inter College Cultural Festival Lehren
2012-13	<ul style="list-style-type: none"> • Member, Cultural Council, Univ of Delhi
2011-12	<ul style="list-style-type: none"> • Member, Examination Committee • Convenor, Prize Distribution Committee, Annual Day

- Member , ECA admission Committee
- Co-Convenor, Lehen, Kalindi College Cultural Festival
- Co-ordinator, Physcom Society
- Convenor, Seating and Shamiana Committee, Alumni Day

Subject/Courses Taught

Courses Taught

- B.Sc. (H) Computer Science, B.Sc. (Physical Sciences), B.Sc. (G) Computer Science, PGDCA, BIS, BIT , PGDCA

Subjects Taught

- Programming Languages – C++, Java, Algorithms, Data Structures, Computer Networks, Multimedia and Database Management Systems, Machine Learning.

Publications (Peer Reviewed/Indexed Journals)

Year of Publication	Title	Journal (Name of the journal. Vol Issue ISSN)	Co-Author
Accepted in Jan 2024	An Ensemble Deep Learning Model for Automatic Classification of Cotton Leaves Diseases	Accepted in Scopus Indexed Indonesian Journal of electrical engineering and computer science	HirenKumar Kukadiya. Divyakant Meva, Shilpa Srivastava
2024	Effective Groundnut Crop Management by Early Prediction of Leaf Diseases through Convolutional Neural Networks DOI: 10.54392/irjmt2412	International Research Journal of Multidisciplinary Technovation, 6(1), pp 17-31, E-ISSN: 2582-1040 , Scopus Indexed	HirenKumar Kukadiya. Divyakant Meva, Shilpa Srivastava
2023	Diabetes mellitus prediction using machine learning within the scope of a generic framework DOI: 10.11591/ijeecs.v32.i3.pp1724-1735	Indonesian Journal of electrical engineering and computer science, 32(3), pp. 1724-1735 ISSN: 2502-4752. Scopus Indexed	Shilpa Srivastava, Ritu Agarwal, Vandana Mehndiratta, Aprna Tripathi
2023	Automatic Diseases Classification and Detection in Castor Oil Plant Leaves Using Convolutional Neural Network https://doi.org/10.1007/s42979-023-02327-6	<i>SN Computer Science, Springer , journal .2023. 4(6), pp 863.</i> ISSN : Scopus Indexed	HirenKumar Kukadiya. Divyakant Meva
2018	Arora, N. and Banati, H., 2018. IM-GSO: A Community Directed Group Search Optimization Approach for Influence Maximization. DOI: 10.1080/01969722.2018.1542854	<i>Cybernetics and Systems, 49(7-8), pp.497-520.</i> Indexed : Scopus, ESCI Impact Factor - 1.8 (2021)	Hema Banati

2016.	Detecting communities in complex networks-A discrete hybrid evolutionary approach https://doi.org/10.1080/1206212X.2016.1210280	<i>International Journal of Computers and Applications</i> , Taylor and Francis, 38(1), pp.29-40. Indexed : Scopus Print ISSN: 1206-212X Online ISSN: 1925-7074	Hema Banati
2016	Multiobjective Group Search Optimization Approach for Community Detection in Networks DOI: 10.4018/IJAEC.2016070103	<i>International Journal of Applied Evolutionary Computation (IJAEC)</i> , IGIglobal publishers, 7(3), pp.50-70. Indexed : DBLP, ACM ISSN: 1942-3594 EISSN: 1942-3608	Hema Banati
2014	“Enabling Inclusive Education in Structured Learning Environments through Social Network Analysis” https://doi.org/10.1504/IJIE.2014.067933	<i>International Journal of Innovation in Education</i> , 2(2/3/4) PP. 151-167, Inderscience. Indexed: Google Scholar, Inspec, ISSN-1755-1528.	Hema Banati
2011	“Clustering in Microarray Data”	<i>Yearly Academic Journal</i> , Kalindi College, Vol 10, PP.96-108, ISSN-2348-9014	-
2012	“Biometrics – A concern for Security”	<i>Yearly Academic Journal</i> , Kalindi College, Vol 11, PP.160-167. ISSN-2348-9014	-

Seminar/Workshop/Conferences Presentations and Publications

1. Nidhi Arora, Reena Jain, Vandana Gupta, Umang Aggarwal, Chetna Gupta, Mahima Kumari, Naina Chaudhary, Pankhuri Jain, Rekha Pal Investigating factors influencing scholastic execution at undergrad level using network analytics, Presented in [ICAICR '19](#) Third International Conference on Advanced Informatics for Computing Research Shimla, India — June 15 - 16, 2019, Proceedings in ACM-DL, ISBN: 978-1-4503-6652-6 doi>[10.1145/3339311.3339319](https://doi.org/10.1145/3339311.3339319)
2. Nidhi Arora¹, Reena Jain², Vandana Gupta³, Aarushi⁴, Mink Singh Chauhan⁵, Shivani Yadav⁶, Pallavi Pal⁷, Umang Aggarwal⁸, Swati Basu⁹ ,“Youth and Social Media: A Case Study of Kalindi College for Women”, Paper presented at “*International Conference on Empowering Women: Fostering Entrepreneurship, Innovation and Sustainability*” jointly organised by SRCC and NITI Aayog on 16-17 July 2018 , IIC, Delhi.
3. Nidhi Arora and Hema banati, “A Framework to Mine Communities Using Nature Inspired Algorithms”, *IEEE International Conference on Research in Computational Intelligence and Communications Networks (ICRCICN)*, 2016a .
Electronic ISBN: 978-1-5090-1047-9 .CD-ROM ISBN: 978-1-5090-1045-5
USB ISBN: 978-1-5090-1046-2 .Print on Demand (PoD) ISBN: 978-1-5090-1048-6
4. Puja Munjal, Nidhi Arora, Hema Banati , “ Dynamics of online Social Networks based on parametric variation of relationship” , in *IEEE International Conference on Research in Computational Intelligence and Communications Networks (ICRCICN)*, 2016b.
Electronic ISBN: 978-1-5090-1047-9 .CD-ROM ISBN: 978-1-5090-1045-5
USB ISBN: 978-1-5090-1046-2 .Print on Demand(PoD) ISBN: 978-1-5090-1048-6

5. Nidhi Arora and Hema Banati, 2016c, "Enhancing Group Search Optimization with Node Similarities for Detecting Communities". In *The International Symposium on Intelligent Systems Technologies and Applications* , 2016, pp. 303-316. Springer International Publishing.
Print ISBN- 978-3-319-47951-4. Online ISBN- 978-3-319-47952-1
6. Hema Banati and Nidhi Arora, 2015a. "TL-GSO: - A Hybrid Approach to Mine Communities from Social Networks", in Proc. of *IEEE International Conference on Research in Computational Intelligence and Communications Networks (ICRCICN)*, 2015, pp. 145-150, IEEE.
Electronic ISBN: 978-1-4673-6735-6 .CD-ROM ISBN: 978-1-4673-6734-9
7. Hema Banati and Nidhi Arora, 2015b. "Modeling Evolutionary Group Search Optimization Approach for Community Detection in Social networks", in Proceedings of the *Third Int. Symposium on Women in Computing and Informatics*, 2015, pp. 109-117, ACM. ISBN: 978-1-4503-3361-0

Book Chapters Published/Books Edited

1. Book: Emerging Trends in Information Technology, 2019, Editor- Dr. Nidhi Arora, Publisher- Bloomsbury India, ISBN: 978-93-89165-99-9
2. Arora, N. and Banati, H., 2017. GSO Based Heuristics for Identification of Communities and Their Leaders. In *Hybrid Intelligence for Social Networks* (pp. 99-127). Springer, Cham.
3. Author of Chap 1-Threaded Trees, BSc.(H)Comp Sc II sem , ILL , University of Delhi, **ISBN: 978-93-85611-37-7**
[Subject \(du.ac.in\) https://vle.du.ac.in/pluginfile.php/1180/mod_resource/content/0/Threaded%20Trees.pdf](https://vle.du.ac.in/pluginfile.php/1180/mod_resource/content/0/Threaded%20Trees.pdf)
4. Author of Chap 2- M-way Trees, BSc.(H)Comp Sc II sem , ILL , University of Delhi, **ISBN: 978-93-85611-37-7**
[M-Way Trees And B-Trees.pdf \(du.ac.in\) https://vle.du.ac.in/pluginfile.php/1179/mod_resource/content/0/M-Way%20Trees%20And%20B-Trees.pdf](https://vle.du.ac.in/pluginfile.php/1179/mod_resource/content/0/M-Way%20Trees%20And%20B-Trees.pdf)

Seminar/ Conference/Workshop Organised

- **Convener** : One week (Online) Interdisciplinary Faculty Development Programme on "Applications of AI-Machine Learning and Soft Computing Techniques" (29th January – 3rd February 2022) organised by Kalindi College, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi.
- **Course Convener** : Value added course on Basic computer and IT skill , 27th jan 2022- 16th feb 2022 Organised by department of computer science kalindi college and CETPA infotech.
- **Convener-** National level FDP in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi on "Moving Towards New Normal with Effective Online Teaching" Organised by Department of Computer Science, Kalindi College held on 1st - 7th December, 2020
- **Convener-** UGC Sponsored National Conference on Emerging Trends in Information Technology held on 1st and 2nd August 2019 at Kalindi College.
- Organised a Students Webinar on "Managing Psychological Lockdown" in Kalindi College, Speaker, Dr. Shivani from Aryabhata College on 6th May 2020.
- **Convener**, Webinar on Importance Of Machine Learning & Data Science In Today's World ,Kalindi College, September 4, 2020

- **Convener**, Inter-College Technical Fest – TECHNOPHILIA ,UG, Kalindi College, October 6, 2020
- **Convener**, Webinar on Cyber security, Kalindi College, January 16, 2021
- **Convener**, Inter-College Technical Fest – TECHNOPHILIA 2.0 , Kalindi College, February 26, 2021
- 2011-12, Organised Seminar on “ Developing Intelligent Machines Using Fuzzy Logic” By Dr. Devendar Tayal at Kalindi College on 26th August 2011, Kalindi College

FDP/Workshop/Trainings/Courses Attended

- One day online workshop on “**Introduction to Machine Learning and Recommender Systems**” organized on **December 09, 2023** by Department of Computer Science, University of Delhi, Delhi.
- COMPUTE 2021(ACM- India Council), 14th Annual Conference, November 18 - 20, 2021 held at Department of Computer Science, University of Delhi.
- Attended One week FDP on Exploratory Data Analysis using Statistical Software R and SPSS” organised by Department of Statistics and Internal Quality Assurance Cell (IQAC) Mata Sundri College for Women, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi. 07th January - 13th January, 2021
- Completed Two week FDP on managing online classes and co-creating MOOCs Organised by Teaching Learning Centre, established under the Pandit Madan Mohan Malaviya National Mission on Teachers and Training scheme of MHRD, Ramanujan College (University of Delhi) from 20th April to 6th May 2020
- One week workshop on E-contents Development and Online Pedagogy CPDHE, DU 23rd May 2020 to 29th May 2020
- One week FDP on Algorithms Department of computer science, University of Delhi 7th July 2016- 13th July 2016
- Workshop on Data Analytics and its Security Issues at Jaypee Institute of Information Technology, Noida, 4th December 2015-5th December 2015
- Refresher course (Three weeks course) CPDHE, Delhi 14 December 2013 to January 4, 2014 (Three weeks course)
- Completed E-Learning course on Social Network Analysis from Course-era on May 8, 2013.
- Orientation Course OR-69 (4 week) CPDHE, ILL, Univ. of Delhi, 13th Dec 2011 to 9th Jan 2012
- Ref. Course in Comp. Sc. & Inf. Tech.- (4 week), ASC, JNU, 29th August 2011 to 23rd Sep 2011
- Teacher Training Programme in algorithms Department of computer science, University of Delhi 20-25th April 2009
- Workshop on Ethical Hacking and Information Security, Keshav mahavidyalaya, 20-21 august 2009
- VLDB Summer school on Frontiers of Database Technology,IIT, Delhi, 1st June 2004 to 4th June 2004,IIT, Delhi

Awards & Distinctions

- Have additionally qualified J and K State Level Eligibility Test (Computer Science) for Lecturer-ship held on 7th August 2005.
- Qualified UGC-NET (2006) in Computer Science.

University Service/ Consulting Activity/ Resource Person/ Invited Talks

- Departmental Advisory Board member, Bharti vidyapeeth College of Engineering, Delhi 2023-24
- External Expert in DRC (CSE), IGDTUW , October 2023

- chaired a session during the 12th International Conference on Soft Computing for Problem Solving (SocProS 2023) held at Indian Institute of Technology Roorkee, Roorkee, India during 11th to 13th August 2023.
- Delivered a Talk on “Understanding Data Science: From Machine Learning to Deep Learning” at Raj Kumar Goel Institute of Technology, Ghaziabad, on 4th October 2023
- Delivered a talk in the Faculty Training & Learning Series-01 on the topic "Particle Swarm Optimization " held on 27 September, 2023, organised by the School of Sciences at CHRIST (Deemed to be University), Delhi NCR campus.
- **Resource Person** : Took sessions on “Deep Learning and Artificial Intelligence” Unit -1 - Post Graduate Diploma in Bioinformatics, Computational Biology and Drug Discovery- 2nd Semester at ACBR, DU on 15th May 2023 and two sessions on 17th May 2023.
- Member, Committee for Faculty of Mathematical Science , Delhi University 2022 onwards
- External Examiner for UG Projects evaluation at Christ University(Deemed to be University), Delhi NCR , April 2023
- Recognized as Co-Supervisor for Ph.D in Department of Computer Science , University of Delhi, April 2023
- **Resource Person** : for two sessions “Getting acquainted with Google services for IT enabled teaching” & “Video e-content creation for MOOC” on 01st & 02nd December, 2022 respectively in Faculty Induction Programme , organised by Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi during 01st - 30th December, 2022.(online).
- **Resource person** and presented the topic “Getting acquainted with Google services -Google Drive, Google form , Google slide, Google website.” under the session/sub-session” in national level FDP on “Moving Towards New Normal with Effective Online Teaching”” Organised by Department of Computer Science, Kalindi College held on 1 st -7 th December, 2020, at Mahatma Hansraj Faculty Development Centre, Hansraj College (online).
- **Resource person** and presented the topic “Getting acquainted with Google services -Google Drive, Google form , Google slide, Google website.” in national level FDP on “E-Content Generation and Managing Online Teaching" Organised by Aurbindo College held on 11th - 17th December, 2020, at Mahatma Hansraj Faculty Development Centre, Hansraj College (online)
- Resource person and presented two topics ““Utilizing Google services for effective online teaching” & “Google sites and open source software for lecture recording” in national level FDP on “Online Teaching Tools” Organised by Mahatma Hansraj Faculty Development Centre, Hansraj College in collaboration with PARAMARSH, UGC SCHEME held on 16th February – 22nd February, 2021, at Mahatma Hansraj Faculty Development Centre, Hansraj College (online)
- **Resource person** and delivered a session on “Data Science What, Where, How a brief Overview” in national level Faculty Development Program on Data Science Organised by Department of Computer science and Applications, Makhanlal Chaturvedui University of Journalism and Communication, Bhopal in collaboration with AICTE held on 7th to 11th September , 2020, (online)
- Session Chair: Chaired a session in International Conference on Advances in Smart Materials and Emerging Technologies organized by IGDTUW held on Jan 23-24, 2020 at IGDTUW , Delhi
- **Resource person** in a Seminar on “Current IT trends”, organised by Makhanlal Chaturvedi National University, Bhopal on 29th November 2017.
- TPC committee member in First International Conference on Advanced Computational and Communication Paradigm held at Skkim Manipal Institute of Technology, Skkim, India during 8-10 Septemeber 2017.
- **Resource person** for Inter-College “Skill Enhancement Workshop for Laboratory Staff” held at Kalindi College (University of Delhi) on 13-14 March, 2018.
- Reviewer of International Journal “IEEE Access”, Feb 2019 . IEEE Access has an impact factor of 3.557, an Eigenfactor of 0.0186, and an article influence score of 1.098 (per 2017 JCR).

Minor Projects Undertaken (Funded)

1. 2017-18: "Social Media for Youth: A Boon or a Bane",Funded by Kalindi College (KC/2017/03) - Principal Investigator- Completed , Six undergraduate students involved
2. 2018-19: "Analysing Real World Relationships Through Network Analytics, Funded by Kalindi College - Principal Investigator- Completed, Six undergraduate students involved