Dr. Bharat Singh

Assistant Professor (Contract)

Contact Information

Department of CSED,
Indian Institute of Information Technology, Ranchi
Ranchi JH 834010
Mobile No. +91-8707223885, +91-7398935805
E-mail: bharatbbd1@gmail.com/bsingh@iiitramchi.ac.in

Objective

To work in an academic/administrative position (i.e., faculty, postdoctoral, or research scientist, etc.) that allows for advanced research in information communication technology (i.e., modeling, analysis, design, and verification) and helps the society in various aspects.

Research Interest

Feature Selection, Feature Reduction, Machine Learning, Data Mining, Data Analytics, Approximate Similarity search, Clustering of Extremely High-Dimensional Data sets, Classification of High Dimensional Data, Feature Selection, Dimensionality Reduction, Non-Negative Matrix Factorization.

Academic Appointments

Assistant Professor — Nov2021-Till Date
Department of Computer Science and Engg,
Indian Institute of Information Technology Ranchi
Rachi, 834004, India

Assistant Professor (Temp. Faculty) — Oct 2020-Nov 2021
Department of Computer Science and Engg,
Indian Institute of Information Technology Ranchi
Rachi, 834004, India

Assistant Professor (TEQIP-III) — Sept 2018- Oct 2020
Department of Computer Science and Engg,
Kamla Nehru Institute of Technology Sultanpur
Sultanpur UP 228118, India

Assistant Professor (Visiting Faculty) — July 2018- Sept 2018
Department of Computer Science and Engg,
Motilal Nehru National Institute of Technology Allahabad
Allahabad UP, 211002, India

Assistant Professor (Temp) — July 2016- May 2018

Department of Information Technology,
National Institute of Technology Raipur
Raipur CG 492010, India

Assistant Professor   July 2010- Nov 2011
Department of Computer Science and Engineering
SRMCEM Lucknow
Lucknow, Faizabad Road, UP, India

Education

Doctor of Philosophy (Ph.D.) in Engineering
Date of thesis Submission   **01 sept 2016**
Awarded on   **06 Feb 2018**
Thesis title: Exploring Data Analytics with special reference to Feature Selection
Department: Information Technology
Institute: IIIT Allahabad
Supervisor:
Professor O.P. Vyas
Professor and CVO
IIIT Allahabad

Master of Technology (M. Tech)   **May 2010**
Department: Computer Science & Engineering
Institute: NIT Durgapur
Division/Class: First (8.6)
Thesis Title: Exploring Quantum Dot Cellular Automata Based Reversible circuit Design
Supervisor:
Dr. Bibhash Sen
Associate Professor
Dept. of Computer Science & Engineering
Mobile: 9434788161
E-mail: bibhash.sen@cse.nitdgp.ac.in

Bachelor of Technology (B. Tech)   **August 2008**
Dept. of Computer Science & Engineering
University: UPTU Lucknow
Division: First (66.4)

Higher Secondary (Std. XI-XII)   **June 2002**
Stream: Science (Maths)
College: Dr. KP Jaiswal Intermediate College Allahabad
Board: UP Board
Division/Class: First (64.6%)

Higher Secondary (Std. IX-X)   **June 2000**
Stream: Science
College: Dr. KP Jaiswal Intermediate College Allahabad
Board: UP Board
Division/Class: Second (58.5%)

National Level Examination   Graduate Aptitude Test in Engineering (GATE) in Computer Science and Engineering / Information Technology in 2008

National Eligibility Test (NET) in Computer Science and Applications in 2017

List of Publications

Refereed International Journals

01. **Bharat Singh**, OP Vyas "A Meta- Heuristic Regression-Based Feature Selection for Predictive Analytics" Journal of Data Science 2014, Vol 23, pp. 106-118, ISSN 1683-1470, DOI http://doi.org/10.2481/dsj.14-032. [SCOPUS Indexed]
02. **Bharat Singh,** OP Vyas "A Feature Subset Selection Technique for High Dimensional Data using Symmetric Uncertainty" JDAIP, Scientific Research Publishing, 2014, vol 2(04), pp. 95-100, ISSN 2327-7211, (IF-1.04) DOI: 10.4236/jdaip.2014.24012. [SCOPUS Indexed]
03. **Bharat Singh,** OP Vyas, "A PSO based Approach for producing Optimized latent Factor for high dimensional data, Int. IGI Journal, IJSSEMT, 2015, vol 7(3), pp. 55-70, ISSN 1947-599X, DOI: 10.4018/IJSSMET.2016070104.[SCOPUS Indexed]
04. **Bharat Singh,** OP Vyas, "Maximum spanning tree based redundancy elimination for feature selection of high dimensional data.", Published in IAJIT 2015, ISSN 2309-4524, (IF -0.724). [SCI Indexed]
05. N Kushwaha, Z sunn, **Bharat Singh**, OP Vyas, A Lesson learned from PMF based approach for Semantic Recommender System" has been accepted for publication in Journal of Intelligent Information Systems, ISSN 1573-7675, pp 1-13, May-2017, IF(1.94), *DOI* 10.1007/s10844-017-0467-2. [SCI Indexed]
06. Manvendra Singh, **Bharat Singh**, "Fair Bandwidth Sharing in Network Using FCFS-TP Protocol" is published in International Journal of Computer Theory and Engineering, Vol. 5, No. 2, April 2013.
07. Bharat Singh, OP Vyas, An approach to Speed-up the convergence rate using PSO for Non-Negative Matrix Factorization. Expert System with Application, Elsevier 2017, ISSN 0957-4174, (IF -1.965).
08. Kushwaha, N., Singh, B.P., & Agrawal, S. (2024). Manifesto of Deep Learning Architecture for Aspect Level Sentiment Analysis to extract customer criticism. ICST Transactions on Scalable Information Systems, 11(6). DOI: https://doi.org/10.4108/eetsis.5698 (WoS).

Refereed International Conferences

01. **Bharat Singh**, N Kushwaha, Ranjana Vyas, OP Vyas, Ensemble of clustering approach for Feature Selection of High Dimensional Data, submitted in ICMLC, 9th International Conference on Machine Learning and Computing, Singapore, 2017.
02. **Bharat Singh,** N Kushwaha, OP Vyas, "Exploiting Anomaly Detection for High Dimensional Data using Descriptive Analysis of data mining" is published in IEEE Conference ICCCT-2013, 20-22, Sept 2013, vol 4 pp. 121-128, 978-1-4799-1572-9, DOI: 10.1109/ICCCT.2013.6749614.
03. N Kushwaha, **Bharat Singh**, OP Vyas, "Using Semantics of Linked open Data Cloud for Explication of Recommender System" accepted in Elsevier Proceeding on ComNet, CIIT & ITC 2013, pp. 357-364, ISSN 2163-2979.
04. **Bharat Singh,** N Kushwaha, OP Vyas, "An Efficient Approach for Discovering Closed Frequent Patterns in High Dimensional Data sets" published in Springer, ICACNI-2014, 24 - 26 June 2014, vol 1, pp. 519-528, Kolkata, India, ISSN 2190-

3018, *DOI* : 10.1007/978-3-319-07353-8_60.

05. N Kushwaha, **Bharat Singh**, OP Vyas, "Keyword prediction from bibliographic RDF data" published in Procedia Computer Science, ISBCC-2014, vol 50, pp. 490-495, ISSN 2277-7970, https://doi.org/10.1016/j.procs.2015.04.019.

06. N Kushwaha, **Bharat Singh**, OP Vyas, "LOD Cloud mining for prognosis Model (case study: Native app for Drug Recommender System)" published in *Advances in Internet of Things*, 4, 20-28., ISSN 2074-8523, DOI: 10.4236/ait.2014.43004.

07. **Bharat Singh**, OP Vyas, "Optimization of Feature Selection Method for High Dimensional Data Using Fisher Score and Minimum Spanning Tree" published in IEEE Int. Conference in INDICON, 11-13 Dec. 2014, DOI: 10.1109/INDICON.2014.7030450.

08. N Kushwaha, R Mahule, AK Singh, **B Singh**, OP Vyas, "Integration of Service Orientation WSN and IoT for E-Commerce" published in IEEE conference INDIAcom 2015, 11-13 March 2015, Delhi India, pp. 1731-1736, ISSN 0973-7529.

09. **Bharat Singh**, Nidhi Kushwaha, OP Vyas, "A Scalable Hybrid Ensemble Model for Text Classification" presented in IEEE 36th conference TENCON, Singapore, 22-25 Nov. 2016, Pages: 3148 – 3152, ISBN: 978-1-5090-2596-1, ISSN: 2159-3450, DOI:10.1109/TENCON.2016.7848630.

10. **Bharat Singh,** N Kushwaha, OP Vyas, An Interpretation of Sentiment Analysis towards Enrichment of Business Intelligence, presented in IEEE 36th conference TENCON, Singapore, 22-25 Nov 2016, **Pages: 18 – 23,** ISBN: 978-1-5090-2596-1, ISSN: 2159-3450, DOI: 10.1109/TENCON.2016.7847950.

11. Singh, B., Nandan, S., Kumar, S., Kushwaha, N. (2023). Prediction of Heart Disease with Machine Learning Methods: Comparison and Analysis. In: Tuba, M., Akashe, S., Joshi, A. (eds) ICT Systems and Sustainability. ICT4SD 2023. Lecture Notes in Networks and Systems, vol 765. Springer, Singapore. https://doi.org/10.1007/978-981-99-5652-4_35.

12. Bharat Singh, N. Kushwaha, "Aspect Level Sentiment Analysis to extract valuable insight for Airline's customer Feedback and Reviews" 4th International Conference on Cognitive Computing and Cyber Physical Systems 2023 (IC4S 2023) ISBN: 1867-8211

13. N Kushwaha Bharat Singh, "Exploiting Deep Learning techniques for Autistic Face Recognition" 7th International Joint Conference on Advances in Computational Intelligence (IJCACI 2023)

14. Sangeeta Kumari, Tushar Jain, Bharat Singh, N. Kushwaha "Examinations of Offline Signature Forgery Detection from Classical to Deep Learning Techniques", ISDIA-2024 UAE.

15. Bharat Singh, Nidhi Kushwaha, Artist Prediction of Painting through Transfer Learning presented at the 5th International Conference on Data Analytics and Management (ICDAM-2024) 14th – 15th June 2024.

16. Nidhi Kushwaha, Bharat Singh, Exploiting handcrafted and Deep Learning Techniques for Autistic Face Recognition presented at the 5th International Conference on Data Analytics and Management (ICDAM-2024) 14th – 15th June 2024.

17. Tripti Kumari, Bharat Singh, Nidhi Kushwaha, Jitendra Kumar Mishra, Weather Forecasting with Time Series Dataset using Deep Learning Algorithms, INTERNATIONAL CONFERENCE on Algorithms and Computational Theory for Engineering Applications (ICACTEA 2024) 2nd & 3rd February, 2024.

Outreach Activities

1. Keynote Speaker on the theme "Online Innovations using Computational Intelligence: A Global Perspective" in the National Conference BITCON-2021.

2. Given a talk as a resource person in Ist international e-conference on Emerging trends in computer Science, Dec 19-20 Jashpur,2020, CG, India

3. Delivered a talk on "Recent Advances In Machine Learning & Artificial Intelligence" at UTTAM MEMORIAL COLLEGE, RAIGARH (CG) for One Day National Webinar on Recent Trends in Artificial Intelligence and

its Significance, Jan 2021.

4. Given a talk on EVOLUITON OF ARTIFICIAL INTELLIGENCE National Seminar on "Robotics and Artificial Intelligence: Application and Implementation"Organized by Department of Computer Science, University Teaching Department SANT GAHIRA GURU UNIVERSITY SARGUJA, AMBIKAPUR (C.G.), Jan 2021.

5. Delivered a session on "Implement real life projects on Image Processing using Modern CNN" at ATAL Academy sponsored online FDP on advanced statistical and Machine Learning Model 2021, December 15-19, 2021.
6. Design and Optimization of Antennas using Machine Learning Algorithms and Techniques "Soft Computing and its Application in Electromagnetics (SCAE-2023)" (Under the KARYASHALA Scheme- A SERB Initiative) 3rd- 9th January 2023.
7. Deliver a talk on "Transition from IPv4 to IPv6" for Technical Skill Development Program for the ICT executives of Coal India Limited on 05.08.2023.
8. Visiting professor for one trimester at IIM Ranchi from Sept 2023- Nov 2023

Professional Activity	**Conference Chair Session**

Conference Chair Session
- Chairing session on "Computing Architectures and Systems" in 36th IEEE TENCON 2016 conference, Singapore.
- Chair a session in IEEE International Conference on Emerging Trends in Industry 4.0 (ETI 4.0), 19-21, May 2021, OP Jindal University, Raigarh, India.

Organising Committee Member
- TPC members of the SmartComp2018 conference, will be held in Taormina (Italy) from 18 to 20 of June 2018.
- Program committee member, International Conference on RICE, held at Institute of Technology, Gopeshwar, Uttarakhand, India during 24-26 March 2017.

Referee Service
- International Journal of Pattern Recognition Letters, Elsevier, ISSN: 0167-8655.
- International Journal Journal of Cases on Information Technology (JCIT), IGI global.
- 2nd International Conference on Research in Intelligent and Computing in Engineering (RICE-2018).
- International Conference SmartComp2018 18-20th June, held in Taormina, Sicily.

Professional Memberships
- Institute for Electrical and Electronics Engineers (IEEE) [Inst.], 2014
- Computer Society of India, 2012-2019
- Advance Computing Machine (ACM), 2013

Career Development Program

STP/QIP (One Week Program)

Workshops/Seminars/Others (Less than One Week Program)
- Participated and presented a paper entitled "A Scalable Hybrid Ensemble model

for Text Classification" in 36th IEEE TENCON 2016 conference on Technologies for Smart Nation, in Singapore, Nov 22-25, 2016.

- Attended one day workshop on European Fellowship and opportunity with funding organized by IIIT Naya Raipur in collaboration with Alliance de International Corporation
- Participated in International Workshop on Big Data Analytics 2015, Indian Statistical Institute Kolkata, India, August 20-21, *2015*.
- Participated in International Workshop and Symposium on Smart City 2015, Indian Institute of Information Technology, Allahabad, India.
- Participated and presented a paper "Optimization of Feature Selection Method for High Dimensional Data Using Fisher Score and Minimum Spanning Tree" in IEEE Indicon 2014, Pune, India, Dec 11 – 13, 2014 .
- Participated and presented a paper in IEEE conference ICCCT 2013, held at MNNIT Allahabad.
- Participated and presented a paper in Springer conference ICACNI 2014, held at St. Thomos college of engineering and technology Kolkata.

NPTEL/SWAYAM Courses	Successfully completed NPTEL Course "**Data Science for Engineers**" with Elite certification conducted by IIT Madras. Successfully completed NPTEL Course "**Machine Learning**" with Elite certification. Successfully completed NPTEL Course "**AI:Knowledge Representation and Reasoning**" with Elite certification conducted by IIT Madras.
Subject or Language Taught	Fundamentals of Computer and Information Technology Data Structure and Algorithms Formal Language and Automata Theory Soft Computing Operations Research and Optimization Techniques
Other Computer Skills	**Editing and Productivity Software** TEX(LATEX, BIBTEX) Office (Microsoft office, Open Office) **Computer Programming tools for R&D work** • R • Eclipse • Oracle • Weka
Awards/ Scholarship	Scholarship under National Scholarship Scheme, Ministry of Human Resource Development (MHRD), Govt. of India**.**
References	1. **Prof O.P. Vyas (Professor and CVO)** Post and Address: Professor in IT Dept. at IIIT-Allahabad, Allahabad, UP Mobile Number: +91-9425501450 Email id: dropvays@gmail.com 2. **Prof. Shirshu Verma (TPO)** Post and Address: Associate Professor in IT Dept. and TPO at IIIT-Allahabad, Allahabad, UP

Mobile Number: +91-9450565329
Email id: shirshu@iiita.ac.in

3. Dr. Bibhash Sen
Post and Address: Assistant Professor in CSE Dept., NIT Durgapur, Durgapur, WB
Mobile Number: +91-9434788161
Email id: bibhash.sen@cse.nitdgp.ac.in

4. Dr. Sudhakar Pandey
Post and Address: Assistant Professor in IT Dept., NIT Raipur, Raipur, CG
Mobile Number: +91-9407627136
Email id: spandey96@gmail.com

Personal Profile

Date of Birth: 10th May 1987
Gender: Male
Languages Proficiency: English, Hindi
Nationality: Indian
Marital Status: Married
Permanent Address: Dr. Bharat Singh S/O Lakshmi Narayan LD-162 ADA Colony
 Naini, Near Goldy Nursing Home, Allahabad (211008)
 Uttar Pradesh, India
Mobile No.: +91-7398935805, +91-8707223885
Email id: bharatbbd1@gmail.com

Declaration:

I declare that the information and facts stated herein above are true and correct to the best of my knowledge and belief.

Place: Allahabad   **(Dr. Bharat Singh)**
Date: 10/01/2024