

Resume



Personal information

First name / Surname

Address

Telephone

E-mail

Nationality

Date of birth

Gender

Dr. Bishwajit Roy

Baneswar, Coochbehar 736133

+91-7870712932 / 8292564108

bishwamail@gmail.com

Indian

08th March 1984

Male

Expertise

Design and develop Generative and Agentic AI-based agents from scratch, machine learning/deep learning, novel optimization coupled ML/DL and ensemble of ML techniques, and pre-train transformer model for several engineering application areas.

Research and Education

Dates

Title of qualification

Thesis title

Department and Institute

Main activities and responsibilities

Supervisor

Type of Institute

September 2015 to January 2021.

PhD - Computer Science & Engineering.

Machine Learning for Rainfall-runoff Modeling Using Optimization Techniques.

Computer Science & Engineering, National Institute of Technology Patna, India.

This research work was made possible by a grant from the Ministry of Electronics & Information Technology (MeitY), Government of India and funded by "Visvesvaraya PhD Scheme for Electronics & IT".

Dr. M. P. Singh, Associate Professor, National Institute of Technology Patna, Bihar, India
National Institute of Technology Patna, Bihar, India.

E. mail – mpps@nitp.ac.in

National Importance Institute

Dates

Title of qualification awarded

Department and University

Thesis Title

Supervisor

Type of Institute

July 2008 to July 2010

Master of Engineering (M.E.) – Computer Science & Engineering (8.05/10)

Computer Science & Engineering, Jadavpur University, India.

Collocation of Words in English.

Dr. Diganta Saha, Professor, Computer Science & Engineering, Jadavpur University, India.

E. mail – ds.cse.ju@gmail.com

State University

Dates

Title of qualification awarded

Department and University

Project title

Type of Institute

June 2002 to June 2006

Bachelor of Technology (B Tech) – Computer Science & Engineering (7.38/10)

Bengal College of Engineering and Technology, WBUT, Kolkata, India.

"Library Management System" using C language.

Private (Affiliated to WBUT, Kolkata, India)

Work Experience

1. Employer
Post held
Duration

2. Employer
Post held
Duration

3. Employer
Post held

IMPS College of Engineering & Technology, West Bengal, India.
Lecturer (2007-2008), Assistant Professor (2011-2013).

03 years.

IBM Kolkata
Software Engineer (2010)

04 months.

L N Mishra College of Business Management, Muzaffarpur, India.
Assistant Professor (2013-2015)

Duration	03 years.
4. Employer Post held Duration	VIT Bhopal Assistant Professor (Grade I) (October 2020- August 2021) 11 months
5. Employer Post held Duration	Bennett University Assistant Professor (Grade I) (September 2021-June 2022), PhD Coordinator (CSE) 11 months
6. Employer Post held Duration	UPES Dehradun Assistant Professor (Senior Scale) (June 2022-July 2023) 1 year
7. Employer Post held Duration	Siliguri Institute of Technology, AI/ML (HOD) Assistant Professor (June 2023- November 2023) 6 months
8. Employer Post holding	Surendranath College (Government college in West Bengal) Assistant Professor (December 2023- till date)
Teaching Experience	
1. UG Subjects	B Tech, BCA, BSc. Theory of Computation, Compiler Design, Operating System, System Software, Artificial Intelligence, Computer Organization & Architecture, Data Structure & Algorithm, Object Oriented Programming using C++ etc.
2. PG Subjects	MCA, MSc. Design and Analysis of Algorithm, Statistical Techniques, Soft Computing, Computational Intelligence, Cloud Computing, Mathematics for computing.
Technical skills and competences	Machine Learning, Deep learning, Nature inspired optimization techniques, Earth and Environmental Modeling, Hydrological modeling, Image processing, Disease prediction.
Computer/instrumental skills and competences	MATLAB, Python, R programming, C & C++, LATEX, Prolog,
Google Scholar:	https://scholar.google.com/citations?user=J9Um6TQAAAAJ&hl=en
Researchgate:	https://www.researchgate.net/profile/Bishwajit-Roy-6
Additional information	
Publications	SCI/SCIE/ESCI/Scopus publications Bishwajit Roy*, M. P. Singh, and Anshuman Singh. "A novel approach for rainfall-runoff modelling using a biogeography-based optimization technique." International Journal of River Basin Management, 19(1), pp.67-80, 2021. (ESCI/Scopus) Bishwajit Roy* and M. P. Singh. "An empirical-based rainfall-runoff modelling using optimization technique." International Journal of River Basin Management, 18(1), pp. 49–67, 2020. (ESCI/Scopus) - Kumar, Radhikesh, Maheshwari Prasad Singh, Bishwajit Roy*, and Afzal Hussain Shahid. "A Comparative Assessment of Metaheuristic Optimized Extreme Learning Machine and Deep Neural Network in Multi-Step-Ahead Long-term Rainfall Prediction for All-Indian Regions." Water Resources Management, 35(6), 1927-1960, 2021. IF = 3.51 Bishwajit Roy, M. P. Singh, Mosbeh Kaloop et al. "Data-driven approach for rainfall-runoff modelling using equilibrium optimizer coupled extreme learning machine and deep neural network." Applied Sciences, July 2021. IF = 2.67 - Armaghani, Danial Jahed, Deepak Kumar, Pijush Samui, Mahdi Hasanipanah, and Bishwajit Roy. "A novel approach for forecasting of ground vibrations resulting from blasting: modified particle swarm optimization coupled extreme learning machine." Engineering with Computers, pp. 1-15, 2020. IF = 7.96

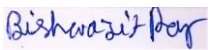
6. Mosbeh R. Kaloop, Deepak Kumar, Fawzi Zarzoura, **Bishwajit Roy**, Jong Wan Hu. "A Wavelet - Particle Swarm Optimization - Extreme Learning Machine Hybrid Modeling for Significant Wave Height prediction." *Ocean Engineering*, 213, p.107777, 2020. **IF = 3.79**
7. Murlidhar, Bhatawdekar Ramesh, Deepak Kumar, Danial Jahed Armaghani, Edy Tonnizam Mohamad, **Bishwajit Roy**, and Binh Thai Pham. "A Novel Intelligent ELM-BBO Technique for Predicting Distance of Mine Blasting-Induced Flyrock." *Natural Resources Research*, 29(6), pp.4103-4120, 2020. **IF = 5.14**
8. Li, Guichen, Deepak Kumar, Pijush Samui, Hima Nikafshan Rad, **Bishwajit Roy**, and Mahdi Hasanipanah. "Developing a new computational intelligence approach for approximating the blast-induced ground vibration." *Applied Sciences*, 10(2), pp. 434(1-20), 2020. **IF = 2.67**
9. Kaloop, Mosbeh R., Deepak Kumar, Pijush Samui, Alaa R. Gabr, Jong Wan Hu, Xinghan Jin, and **Bishwajit Roy**. "Particle Swarm Optimization Algorithm-Extreme Learning Machine (PSO-ELM) model for predicting resilient modulus of stabilized aggregate bases." *Applied Sciences* 9(16), pp. 3221(1-13), 2019. **IF = 2.67**
10. **Bishwajit Roy** et al. "Analyzing Uncertainties in Flood Risk Assessment and Management Models: Recent state-of-the-art, difficulties and future scope." *International Journal of Geo-Information (Major Revision)* **IF = 2.89**
11. Zeng, Jie, **Bishwajit Roy**, Deepak Kumar, Ahmed Salih Mohammed et al. "Proposing several hybrid PSO-extreme learning machine techniques to predict TBM performance." *Engineering with Computers*, pp. 1-17, 2021. **IF = 7.96 (Citations: 18)**
12. Gabr, Alaa R., **Bishwajit Roy**, Mosbeh R. Kaloop et al. "A novel approach for resilient modulus prediction using extreme learning machine-equilibrium optimiser techniques." *International Journal of Pavement Engineering*, pp. 1-11, 2021. **IF = 4.13**
13. Kardani, N., Bardhan, A., **Roy, B.**, Samui, P., Nazem, M., Armaghani, D.J. and Zhou, A., 2021. A novel improved Harris Hawks optimization algorithm coupled with ELM for predicting permeability of tight carbonates. *Engineering with Computers*, pp.1-24. **IF = 7.96**
14. Bardhan, A., Kardani, N., Alzoubi, A.K., **Roy, B.**, Samui, P. and Gandomi, A.H., 2022. Novel integration of extreme learning machine and improved Harris hawks optimization with particle swarm optimization-based mutation for predicting soil consolidation parameter. *Journal of Rock Mechanics and Geotechnical Engineering*. **IF = 4.33**
15. Mosbeh R. Kaloop, **Bishwajit Roy**, Kuldeep Chourasia, Sean-Mi Kim, Hee-Myung Jang, Jong Wan Hu *, Basem S. Abdelwahed, 2022. Shear Strength Estimation of Reinforced Concrete Deep Beams using a Novel Hybrid Metaheuristic Optimized SVR Models. *Sustainability*, **IF = 3.88**.
16. Ramesh Murlidhar Bhatawdekar, Radhikesh Kumar, Mohanad Muayad, Sabri Sabri, **Bishwajit Roy**, Edy Tonnizam Mohamad, Deepak Kumar, Sangki Kwon, 2022. Estimating flyrock distance induced due to mine blasting by extreme learning machine coupled with an equilibrium optimizer. *Sustainability*, **IF = 3.88**.
17. **Bishwajit Roy**, Lokesh Malviya, Amrendra Kumar, Radhikesh Kumar, Avishek Banerjee, et al. 2025. Prediction of soil wind erodibility using RFE-based ensemble modelling. *Geoscience Letters*, (2nd revision) **IF = 4.0**.
18. **Bishwajit Roy**, et al. "Hybrid Deep Learning Approach for Stress Detection Using Decomposed EEG Signals." *Diagnostics* 13.11 (2023): 1936. **IF = 3.99**.

Conferences (7) /Book chapter (1)

1. **Bishwajit Roy** and M. P. Singh, "A Metaheuristic-based Emotional ANN (EmNN) Approach for Rainfall-runoff Modeling", 4th International Conference on Communication and Electronics Systems (ICCES 2019). pp. 454–458. IEEE, 2019. **(Citations: 01)**
2. Shahid, Afzal Hussain, Maheshwari Prasad Singh, **Bishwajit Roy**, and Aashish Aadarsh. "Coronary Artery Disease Diagnosis Using Feature Selection Based Hybrid Extreme Learning Machine." In 2020 3rd International Conference on Information and Computer Technologies (ICICT), pp. 341-346. IEEE, 2020. **(Citations: 05)**
3. Kumar Radhikesh, M. P. Singh, and **Bishwajit Roy**. "A deep learning approach for monthly rainfall prediction over Indian region." International Conference on Advances in Systems, Control and Computing (AISCC-2020).

Activities

1. Participated in **two weeks** training program on "**Data Structures and Algorithms**" organized by Dept. of CSE, NIT Patna during 15-24 December, 2015.
2. Participated in **one-week** short term course on "**Foundation of Data Security**" from 16-20 Feb., 2016 at NIT Patna.
3. Participated in one-week short term training program on "**Fuzzy Sets, System**" organized by Dept. of CSE, NIT Patna during 25-30 April 2016.
4. Participated in "**Parallel Programming Basics**" **one day** Workshop organized by Dept. of CSE, IIT

	Patna on May 30, 2016.
	- Participated in "International Workshop on Fuzzy Logic research applications (ITWFLRA 2017)" organized by Dept. of CSE, Indira Gandhi Delhi Technical University for Women from 16-20 September, 2017 at New Delhi. - Participated in Research Evaluation Workshop held at AU College of Engineering Visakhapatnam during 16-18 Nov., 2017. - Participate in one-week Faculty development programme on "AI & Machine Learning" organized by Dept. of CSE, NIT Patna during 23-27 April 2019. - Participate in one-week Faculty development programme on "NLP" organized by Dept. of CSE, NIT Patna during 06-10 January 2020. - Participated in "Big Data Computing: A practical approach" one-week Workshop organized by Dept. of CSE, IIT Patna during 03-07 December, 2017. - Participate in one-week Faculty development programme on "Cyber Security using ML/Big Data Analytics" organized by Dept. of CSE, NIT Patna during 17-21 February 2020. - Participate in one-week Faculty development programme on "Emerging Research Trends in Artificial Intelligence and Computational Intelligence" organized by Dept. of CSE, Arunachal Pradesh, India from 15th November–19th November 2021.
Awards/Achievements	- Reviewer of several SCI/SCIE/ Scopus indexed journals. - Qualified in GATE-2007 (Computer Science & Engineering), Organized by IIT Kanpur. - Qualified in UGC NET-2012 (December) (Computer Science and Applications), Organized by UGC New Delhi. - GATE Scholarship from MHRD, India during ME (2008-2010). - Ph.D. Scholarship from the Ministry of Electronics & Information Technology (MeitY), Government of India and funded by "Visvesvaraya PhD Scheme for Electronics & IT". "Quarterly Franklin Membership" (Membership ID#XR75666) by editorial board of London Journals Press (UK). - Award: Young researcher - AI/ ML application in Multi-discipline by Innovative Consultancy Research Pte. Ltd., 698, Circular Road, #02-01, 049422, Singapore.
Certificates Courses	- Blockchain and Bitcoin Fundamentals, Udemy, 2022 - Blockchain: Foundations and Use Cases, Coursera, 2022
Other language(s)	Bengali, Hindi, English.
Other skills and competences	Reading Ramayana, Mahabharata, and Puranas; Art and Yoga.
References	- Dr. M. P. Singh, Professor, Department of Computer Science and Engineering, National institute of Technology, Patna. Bihar-800005, India. Email: mps@nitp.ac.in - Dr. Diganta Saha, Professor, Computer Science & Engineering, Jadavpur University, India. E. mail – ds.cse.ju@gmail.com - Dr. Pijush Samui, Associate Professor, Department of Civil Engineering, NIT Patna, Patna – 800005 Bihar, India, and Adjunct Professor, Ton Duc Thang University, Ho Chi Minh City, Vietnam. E-mail: pijush@nitp.ac.in/pijush.samui@tdt.edu.vn
Future Contribution	- Publish research articles (SCI/SCIE indexed) or Innovative patents. - Propose Agentic AI-based project proposals. - Conduct International conferences with collaboration of international universities abroad.
Declaration	I affirm you that all the trivia furnished above are true to my best knowledge and asserting that I will be working for the organisation to give out the best potential in me.
	Truly  Bishwajit Roy