

CURRICULUM VITAE

Abhishek Bajpai

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Permanent Address

83, S-Block, Yashoda Nagar
Kanpur 208011
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Educational Degrees

- PhD.* Department of Computer Science and Engineering, Harcourt Butler Technical University, Kanpur, UP
- M.Tech.* Department of Information Technology, Indian Institute of Information Technology, Allahabad, UP, 2014, 8.1 (CGPA)
- B.Tech.* Gautam Buddha Technical University, Lucknow, 2011, 69.30 %
- Higher Secondary* RPM Inter College, Kanpur, UP, 2006, 94.20%, Board Rank-02
- Secondary* RPM Inter College, Kanpur, UP, 2004, 85.83 %, Board Rank-09

Professional Experience

- Assistant Professor* Department of Computer Science and Engineering, Government Engineering College, Kannauj, Uttar Pradesh (December 2017 - Present)
- Assistant Professor* Department of Computer Science and Engineering, SRM University, Deva Road, Lucknow, Uttar Pradesh 225003 (August 2014 - December 2017)

Member of Professional / Technical Committees

1. Member, Technical Team Committee of Third International Conference on Next Generation Computing Technologies, University of Petroleum & Energy Studies, Dehradun
2. Reviewer, Oriental Journal of Computer Science and Technology
3. Member Editorial Board, Journal of Advanced Computing and Communication Technologies
4. Member, Technical Team Committee of First International Conference on Information Technology, Communications and Computing (ICITCC 2017)
5. Member, Technical Team Committee of Second International Conference on Communication, Computing and Networking (ICCCN'18)
6. Reviewer, Second International Conference on the Future of ASEAN (ICoFA-18)
7. Member Editorial Board, International Journal of Distributed Computing and Technology, Journals Pub.

Patents

1. Indian Patent "A method to detect Sybil attack in VANET using signal and time-based fuzzy cluster scheme" published on Oct 2021
2. South African Patent "An Effective Method for Detecting and Preventing Malicious Node for Collaborative Grayhole Threats in Mobile Ad-Hoc Networks" granted in March 2022.
3. German Patent "An evolutionary neuro-fuzzy system using evolutionary fuzzy clustering and syndicated neural networks" granted in November 2022

Research Projects

1. **Name:** Real-Time Water Quality monitoring of Ganga at Kannauj using an IOT Environment
Role: Co-PI
Duration - 2 Years
Funding Agency: Visvesvaraya Scheme, AKTU Lucknow
2. **Name:** A Pilot Project to Improve Potato Productivity in The Village, Aher Kannauj Using an IoT-Based Deep Learning Framework
Role: Principal Investigator
Duration- 3 Years
Funding Agency: UP CST

Journal Papers

1. Bajpai, A., Chaurasia, D., & Tiwari, N. (2024). A novel methodology for anomaly detection in smart home networks via Fractional Stochastic Gradient Descent. *Computers and Electrical Engineering, Elsevier*, 119, 109604. (SCI IF =4.0)
2. Tiwari, N. K., Bajpai, A., Maurya, S., & Chaurasiya, D. (2024). Efficient Forwarding Rule Management in Software Defined Network via Subnet-Based Pattern Matching. *SN Computer Science*, 5(6,)Springer, 1-12.
3. Bajpai, A., Tiwari, N., Yadav, A., Chaurasia, D., & Kumar, M. (2024). Enhancing Underwater Object Detection: Leveraging YOLOv8m for Improved Subaquatic Monitoring. *SN Computer Science, Springer* 5(6), 1-10.
4. Patel, R., Chauhan, J., Tiwari, N. K., Upadhyay, V., & Bajpai, A. (2024). A Deep Learning Framework for Hourly Bitcoin Price Prediction Using Bi-LSTM and Sentiment Analysis of Twitter Data. *SN Computer Science, Springer*, 5(6), 767.
5. Bajpai, A., Verma, H., & Yadav, A. (2024). Optimizing data aggregation and clustering in Internet of Things networks using principal component analysis and Q-learning. *Data Science and Management, Elsevier* 7(3), 189-196.
6. Gupta, D., Bajpai, A., Tiwari, N. K., & Yadav, S. (2024). Energy-Efficient Routing Optimization for Underwater Internet of Things using Hybrid Q-Learning and Predictive Learning Approach. *Procedia Computer Science, Elsevier*, 235, 45-55.
7. Abhishek Bajpai and Titiksha Tyagi. "An Efficient Approach to Detect and Predict the Tomato Leaf Disease Using Enhance Segmentation Neural Network." *SN Computer Science* 4.6 (2023): 795.
8. Abhishek Bajpai, Mansi Chaurasia "A Novel Power-Efficient Data Aggregation Scheme for Cloud-Based Sensor Networks." *International Journal of Mobile Computing and Multimedia Communication* 13.4 (2022)
9. Abhishek Bajpai and Shivangi Nigam. "An Effective Computing Service Provider using Virtual Cloud in Ad-hoc Network." *International Journal of Wireless and Mobile Computing* 17.2 (2019): 136-141
10. Vijay Shankar Pandey and Abhishek Bajpai "Predictive Efficiency of ARIMA and ANN model: A Case Analysis of Nifty-Fifty in Indian Stock Market.", *International Journal of Applied Engineering Research* Vol 14 (2), 232-244 (2019); ISSN:0973-4562
11. Abhishek Bajpai, Shivangi Nigam. "A Study on the Techniques of Computational Offloading from Mobile Devices to Cloud," *Advances in Computational Sciences and Technology* Vol 10, No. 7, pp. 2037-2060 (2017); ISSN 0973-6107.
12. Shivangi Nigam and Abhishek Bajpai. "An Optimal Resource Provisioning Algorithm for Cloud Computing Environment." *Oriental Journal of Computer Science & Technology*, Vol. 10, No.2, pp. 371-384 (2017); ISSN:0974-6471. DOI: <http://dx.doi.org/10.13005/ojcs/10.02.17>
13. Shivangi Nigam, Abhishek Bajpai, Neeraj Kumar Tiwari. "Signal and Time-Based Fuzzy Cluster Scheme to Detect Sybil Attack in VANET" *International Journal on Computer Science and Engineering*, Vol. 9 No.07, pp. 452-458 (2017); ISSN: 2229-5631.
14. Chandra Kishor Pandey, Neeraj Kumar, Vinay Kumar Mishra and Abhishek Bajpai." Identifying Various Roadways Obstacles in Infrastructure Less Environment Using Depth Learning Approach", *Oriental Journal of Computer Science & Technology*, Vol.10, No.3,2017, pp.585-592,(2017); ISSN:09746471.DOI:<http://dx.doi.org/10.1300/ojcs/10.03.05>
15. Samridhi Gupta, Abhishek Bajpai, and Neeraj Kumar Tiwari. "Dynamic Load Balancing in Cloud Computing Using Ant Colony Optimization.", *International Journal of Scientific Research in Science, Engineering and Technology* (2017); ISSN:23944099.

16. Jaida Khatoon, Abhishek Bajpai, and Neeraj Kumar Tiwari. " Malicious Node Detection in Vehicular Cloud Computing", *International Journal of Scientific Research in Science, Engineering and Technology* (2017); ISSN: 23944099.
17. Abhishek Bajpai and Shivangi Nigam. "An Optimized Approach in Digital Gateway of Toll Tax Collection Using RFID Card.", *International Journal for Science and Research in Technology* (2017); ISSN:2395-1052.
18. Bineet Kumar Gupta, Neeraj Kumar and Abhishek Bajpai. "Integrating User-Centered Design Process and Ergonomics of Human-Computer Interaction to Assist Data Quality Issues ", *International Journal of Advanced Studies in Computers, Science & Engineering* (2017), ISSN: 2278 7917
19. Shukla, Ashutosh, Vijay Shankar Pandey, and Abhishek Bajpai. "A Pilot Study on Enigma of Smart Cities and Urban Poor Migrants. " *International Journal for Research in Engineering Application & Management, Population Vol 3(8),25-80* (2017) ISSN: 2454-9150

Conference Papers (National /International)

1. Gupta, A., Mishra, P., Tiwari, N. K., Bajpai, A., & Yadav, S. (2024, June). Pneumonia Detection in Chest X-Ray Images Using Efficient and Lightweight Convolutional Neural Networks. In *2024 IEEE Students Conference on Engineering and Systems (SCES)* (pp. 1-6). IEEE.
2. Singh, L., Chaurasia, D., Tiwari, N. K., Upadhyay, V., & Bajpai, A. (2024, April). Driver's Seat Belt Detection Using CNN-SVM: A Hybrid Approach. In *2024 IEEE 13th International Conference on Communication Systems and Network Technologies (CSNT)* (pp. 898-904). IEEE.
3. Tiwari, N. K., Bajpai, A., Srivastava, V., Yadav, S., & Tiwari, N. (2024, April). Integrating Pretrained CNN and SVM for Improved Lung Cancer Classification. In *2024 IEEE 13th International Conference on Communication Systems and Network Technologies (CSNT)* (pp. 922-927). IEEE.
4. Pandey, A., Srivastava, V., Yadav, S., Tiwari, N., Patro, B. D. K., & Bajpai, A. (2023, November). Handwritten Signature Detection and Verification Using CNN. In *International Conference on Trends in Computational and Cognitive Engineering* (pp. 381-388). Singapore: Springer Nature Singapore.
5. Bajpai, A., Maurya, A., & Yadav, A. (2023, July). A Hybrid Approach for Enhancing Data Aggregation Security in the Internet of Medical Things. In *2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT)* (pp. 1-6). IEEE.
6. Rai, H., Bajpai, A., Tyagi, M., & Dubey, K. (2023, July). Parkinson's disease detection using a novel weighted ensemble of CNN models. In *2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT)* (pp. 1-6). IEEE.
7. Bajpai, A., Srivastava, V., Yadav, S., & Sharma, Y. (2023, July). Multiple Flying Object Detection using Alex Net Architecture for Aerial Surveillance Applications. In *2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT)* (pp. 1-6). IEEE.
8. Bajpai, A., & Yadav, A. A Novel Approach for Secure Data Aggregation Scheme in Battlefield Surveillance Using Elliptic Curve Cryptography. In *International Conference on Cryptology & Network Security with Machine Learning* (pp. 265-277). Singapore: Springer Nature Singapore.

9. Bajpai, A., Rai, H., & Tiwari, N. (2023, March). An Efficient CNN-based Method for Classification of Red Meat Based on its Freshness. *In International Conference on Machine Learning, IoT and Big Data* (pp. 393-405). Singapore: Springer Nature Singapore.
10. Bajpai, A., Tyagi, M., Khare, M., & Singh, A. (2023, August). A Robust and Accurate Potato Leaf Disease Detection System Using Modified AlexNet Model. *In 2023 9th International Conference on Computer and Communication Engineering (ICCCCE)* (pp. 264-269). IEEE.
11. Patel, S., Srivastava, V., & Bajpai, A. (2023, March). Three Fold Classification Using Shift Invariant Deep Neural Network. *In 2023 9th International Conference on Advanced Computing and Communication Systems (ICACCS)* (Vol. 1, pp. 787-791). IEEE.
12. Bajpai, A., Tiwari, N. K., Tripathi, A. K., Tripathi, V., & Katiyar, D. (2023, April). Early leaf disease prediction in Paddy crop using Deep learning model. *In 2023 2nd International Conference on Paradigm Shifts in Communications Embedded Systems, Machine Learning and Signal Processing (PCEMS)* (pp. 1-6). IEEE.
13. Agrawal, N., Bajpai, A., Dubey, K., & Patro, B. D. K. (2023, April). An Effective Approach to Classify Fraud SMS Using Hybrid Machine Learning Models. *In 2023 IEEE 8th International Conference for Convergence in Technology (I2CT)* (pp. 1-6). IEEE.
14. Bajpai, A., Sinha, S., Yadav, A., & Srivastava, V. (2023, June). Early Prediction of Cardiac Arrest Using Hybrid Machine Learning Models. *In 2023 17th International Conference on Electronics Computer and Computation (ICECCO)* (pp. 1-7). IEEE.
15. Tiwari, N. K., Kushwaha, A., Kumar, L., & Bajpai, A. (2023, April). An Ensemble Heterogeneous Hybrid Model for Fake News Detection. *In 2023 IEEE 12th International Conference on Communication Systems and Network Technologies (CSNT)* (pp. 954-960). IEEE.
16. Patel, Sakshi, Vivek Srivastava, and Abhishek Bajpai. "Three-Fold Classification Using Shift Invariant Deep Neural Network." *2023 9th International Conference on Advanced Computing and Communication Systems (ICACCS)*. Vol. 1. IEEE, 2023.
17. Bajpai, Abhishek, Mohini Tyagi, Bdk Patro, and Shashank Yadav. "Detecting Foliar Diseases in Potato Crops Through a Network of Convolutional Neurons." *In 2023 9th International Conference on Advanced Computing and Communication Systems (ICACCS)*, vol. 1, pp. 254-259. IEEE, 2023.
18. Bajpai, A., Srivastava, V., Shuaib, M., Jaiswal, A., Bharany, S., Alam, S., & Ahmad, S. (2022, December). An Efficient Hybrid Model to Summarize the Text Using Transfer Learning. *In International Conference on Data, Engineering and Applications* (pp. 67-76). Singapore: Springer Nature Singapore.
19. Bajpai, Abhishek, and Tripti Singh. "Localization of the Sensor Nodes in Precision Agriculture using a Hybrid Model." *2022 IEEE 19th India Council International Conference (INDICON)*. IEEE, 2022
20. Bajpai, Abhishek, Anjali Singh, and Abhineet Verma. "An Efficient Method to Predict the Tata-Motors Stock Price using Hybrid Machine Learning Methods." *2022 14th International Conference on Computational Intelligence and Communication Networks (CICN)*. IEEE, 2022.
21. A. Bajpai, S. Chaubey, B. Patro and A. Verma, "A Real-Time Approach to Classify the Water Quality of the River Ganga at Mehandi Ghat, Kannauj," *2022 IEEE International Conference on Artificial Intelligence in Engineering and Technology (IICAJET)*, 2022, pp. 1-6, DOI: 10.1109/IICAJET55139.2022.9936820
22. Abhishek Bajpai and Anjali Singh, "An IoT-based real-time Time-bound medical solution for patients" *National Conference on Digital Nation –organized by Computer Society of India*. ISBN 978-93-5593-719-3
23. Sanjeev Yadav, Rupesh Kumar, Naveen Tiwari and Abhishek Bajpai. "An Effective Approach to Detect & Prevent Collaborative Grayhole Attack by Malicious Node in

- MANET". *19th International Conference on Intelligent Systems Design & Applications, Springer, 2020*
24. Pranchal Mishra, Ayush Tripathi, Abhishek Bajpai and Naveen Tiwari. "Hybrid approach for trajectory identification of mobile node via Lagrange interpolation and Kalman filtering framework". *19th International Conference on Intelligent Systems Design & Applications, Springer, 2020*
 25. Rohan Tyagi, Abhishek Bajpai, BDK Patro, Neelam Srivastava. "An Algorithm to Generate Largest Prime Number". *Advances in Computing and Intelligent Systems (pp. 79-91). Springer, Singapore, 2020. https://doi.org/10.1007/978-981-15-0222-4_7 , ISBN: 978-981-15-0221-7*
 26. Rajput, Jyotsna and Bajpai, Abhishek, Study on Deterministic and Probabilistic Computation of Primality Test (February 24, 2019). Available at SSRN: <https://ssrn.com/abstract=3358737> or <http://dx.doi.org/10.2139/ssrn.3358737>
 27. Akash Sachan, Shivangi Nigam, and Abhishek Bajpai. "An Energy Efficient Virtual-MIMO Communication for Cluster-Based Cooperative Wireless Sensor Network." *9th International Conference on Computing, Communication and Networking Technologies (ICCCNT). IEEE, pp 1-6,2018.*
 28. Nigam, Shivangi, Abhishek Bajpai, and Bineet Gupta. "Enhancing Job Opportunities in Rural India Through Constrained Cognitive Learning Process: Reforming Basic Education." *Intelligent Systems Design and Applications: 17th International Conference on Intelligent Systems Design and Applications (ISDA 2017) held in Delhi, India, December 14-16, 2017. Vol. 736. Springer, 2018.*
 29. Abhishek Bajpai, Shivangi Nigam " Normalized Scores for Routes in MANET to Analyze and Detect Collaborative Blackhole Attack", *3rd International Conference on Next Generation Computing Technologies (NGCT-17), UPES, Dehradun,2017*
 30. Radhika Bakshi, Deeksha Gupta, Neeraj Kumar Tiwari, Abhishek Bajpai. "A Study on Black Hole Attack in MANET", *Proceeding of International Conference on Computing, Communication and Control Technology, SRMCEM Lucknow, (2016) pp 62-70, ISBN:978-93-5258-814-5*
 31. Abhishek Bajpai, Neeraj Kumar Tiwari, Ashish Upadhyay." Implementation of ELMS for Advance Library Management System", *National Conference on Information Security Challenge NCIS, BBAU Lucknow, (2016) pp1-3, vol II ISBN: 978-93-85304-35-4.*
 32. Shruti Singh, Abhishek Bajpai, Suryambika. "A Survey on black hole attack in MANET", *Proceedings of International Conference on recent cognizance in Wireless Communication and Image Processing, Poornima University, Jaipur in association with Springer, (2015) pp 59. DOI 10.1007/978-81-322-2638-3_105, ISBN 978-81-322-2636-9.*
 33. Suryambika, Abhishek Bajpai, and Shruti Singh. "A Survey on Security Analysis in Cloud Computing." *Proceedings of the International Conference on Recent Cognizance in Wireless Communication & Image Processing: ICRCWIP-2014. Springer, (2016) DOI: 10.1007/978-81-322-2638-3_105, ISBN 978-81-322-2636-9.*

Book/Book-Chapters

1. Bridging the Gap between Disabled People and New Technology in Interactive Web Application with the Help of Voice "Abhishek Sachan, Abhishek Bajpai, Ashutosh Kumar and Neeraj Kumar Tiwari, *Book Chapter in Artificial Intelligence and Network Security*", *DESIDOC-New Delhi, ISBN:9678-86514-73*

Research Guidance

M.Tech:

1. **Suryambika Singh:** Secure computing service provider using the virtual cloud in an Ad hoc network (2014-15)
2. **Shruti Singh:** An effective remedy to black hole attack in mobile Ad-hoc Networks (2014-15)
3. **Samrridhi Gupta:** Load balancing in Cloud Computing using Data Centric Algorithm (2016-17)
4. **Jaيدا Khatoun:** Malicious node detection in vehicular Ad-hoc network (2016-17)

Workshop/FDP/STC Attended

1. "FDP on "Security Aspects in Computer Science and its Applications" organized by the Department of Computer Science conducted by NIT, Prayagraj (16-10-2023 to 20-10-2023)
2. "FDP on Big Data and Analytics" organized by the Department of Information Technology conducted by NIT, Jalandhar (03-07-2023 to 07-04-2023)
3. "FDP on Security Aspects in Computer Science and its Applications (SACSA-2022)" conducted by MNNIT Prayagraj, UP (17-10-2022 to 21-10-2022)
4. "Short Term Course on Introduction to Programming: A Pedagogical Approach ", Conducted by IIT, Kanpur, UP (13-08-2019 to 18-08-2019)
5. "Short Term Course on High-Performance Computing in Science and Engineering ", Conducted by IIT, Kanpur, UP (25-02-2019 to 01-03-2019)
6. "Short Term Course on Embedded Systems Design for the Internet of Things", Conducted by IIT, Kanpur, UP (30-05-2018 to 03-06-2018)
7. "FDP on New Mode of Learning & Teaching in Higher Education" Organized by Shri Ramswaroop Memorial University, Lucknow on 10-15 July 2017
8. "Short Term Course on Artificial Neural Network & Fuzzy Logic Through ICT", Conducted by Integral University, Lucknow, UP (24-04-2017 to 28-04-2017)
9. " One Week Short Term Course on Recent Developments and Challenges in Internet of Things Security", Conducted by National Institute of Technology, Kurukshetra on 3-8 July 2017.
10. "NPTEL Online Certification Course (8 Week) on Wireless Ad-hoc and Sensor Network ", Conducted by Indian Institute of Technology, Kharagpur on Jan-Mar 2017
11. "Short Term Course on Tools for Engineering Research Through ICT", Conducted by Integral University, Lucknow, UP (30-01-2017 to 03-02-2017)
12. "International Workshop on Computational Intelligence and its Applications", Organized by South Asian University, New Delhi on May 2016
13. "FDP on Effective Teaching & Learning Process" Organized by Shri Ramswaroop Memorial University, Lucknow on 6-11 July 2015
14. "ATAL FDP on Internet of Things" Organized by Indian Institute of Information Technology, Kota from 12-16 Oct 2020

Awards/ Fellowship

1. Awarded Twice as 'Merit Scholar' by Uttar Pradesh Secondary Education Department, Allahabad.
2. MHRD-GATE fellowship (2012-2014)

Conference/Workshop/FDP/STC Organized

1. Special Session Organizer ,IEEE- INDICON-2022 , organized by Cochin Institute of Science and Technology, Kerala
2. Convener, One Week ATAL FDP on "Machine Learning & Intelligent Systems" held at Rajkiya Engineering College, Kannauj on 5-9, October 2020
3. Convener, One Week FDP on " Emerging research trends in computation and communication" held at Rajkiya Engineering College, Kannauj on 24-28, September 2019
4. Organizing Secretary, First International Conference on " Emerging Trends in Technology and Applications" held at Rajkiya Engineering College, Kannauj on 1-2 Feb 2019
5. Member, Organizing Committee of First International Literary Conference held at SRM University, Deva Road, Lucknow

Membership in Scientific / Engineering Bodies

1. Member, ACM(India) –Member ID: 4701340
2. Member, IEEE (Asia and Pacific)- Member ID - 96516884
3. Member, CSTA (Computer Science Teachers Association) -USA: 3825907
4. Member, International Journal of Application or Innovation in Engineering & Management (IJAEM) –Member ID: 1110
5. Member, Computer Society of India –Member ID: 2060000014
6. Member, International Association of Engineers – Member ID: 191403
7. Life Member, The Indian Science Congress Association – Member ID: L34015

Academic and Administrative Activities

1. Held the position of ' Registrar – at Rajkiya Engineering College, Kannauj, UP
2. Held a position of 'Programme Officer-NSS Unit' – Rajkiya Engineering College, Kannauj, UP
3. Member of DPC, Rajkiya Engineering College, Kannauj
4. Held the position of 'Coordinator- Unnat Bharat Abhiyan (UBA)- Rajkiya Engineering College, Kannauj, UP
5. Held a position of 'In charge- Software and Electronics maintenance ' – Rajkiya Engineering College, Kannauj
6. Held the position of 'Nodal Officer'- One District One Product for Auraiya District
7. Held a position of 'In charge- IoT Lab' – Rajkiya Engineering College, Kannauj
8. Held the position of 'Faculty Placement Coordinator-SRM University, Lucknow'
9. Held the position of 'Assistant Coordinator –Technical Club at SRM University, Lucknow'
10. First runner-up in software development competition in IIT-K
11. An alumnus of Cisco Netacad Academy.

Personal Detail

Date of birth: February 28, 1989

Place of birth: Kanpur, Uttar Pradesh, India

Marital status: Married
