



Bhawani Shankar Pattnaik, M.Tech.

Designation : Associate Professor

Department : Department of Computer Science & Technology
(JOINED THE INSTITUTE IN JAN 2022)

Contact : +919437166101 (M)

Email : bhawani.pattnaik@silicon.ac.in, &
bhawani.pattnaik@gmail.com

RESEARCH INTERESTS

Internet of Things and Edge Computing

- ✓ Development of IoT Solutions
- ✓ Edge driven machine learning solutions for IoT Systems.
- ✓ Soft-sensor Modeling using data driven techniques
- ✓ Predictive Analytics for Machine health

Academic Qualifications

Ph. D. (Computer Science and Engineering), BPUT, Odisha, India (Thesis Submitted)

PG Diploma in Business Management from ICFAI University, India

M. Tech. (Computer Science and Engineering) BPUT, Odisha, India

B.Tech. (Computer Science and Engineering) NIST, Berhampur, Odisha, India

Teaching Experience/Industrial Experience/Research Experience

- ✓ 20 Years of Teaching Experience
- ✓ 2 Years of Industry Experience
- ✓ 7 years of Research Experience

PUBLICATIONS

JOURNAL & CONFERENCES

- [1]. Pattnaik, B.S., Pattanayak, A.S., Udgata, S.K., Panda, A.K. et al. Advanced centralized and distributed SVM models over different IoT levels for edge layer intelligence and control. *Evol. Intel.* (2020). <https://doi.org/10.1007/s12065-020-00524-3> (IF: 0.94)
- [2]. S. Pattanayak, B. S. Pattnaik and A. K. Panda, "Real Time Monitoring of Water Quality in IoT Environment through Android Application", in *Test Engineering and Management Journal*, Issue: November-December 2019, Page no. 1694– 1701, ISSN: 0193-4120. (SCOPUS)
- [3]. S. Pattanayak, B. S. Pattnaik, S. K. Udgata and A. K. Panda, "Development of Chemical Oxygen on Demand (COD) Soft Sensor Using Edge Intelligence," in *IEEE Sensors Journal*, vol. 20, no. 24, pp. 14892-14902, 15 Dec. 15, 2020, doi: 10.1109/JSEN.2020.3010134. (IF: 3.076)

- [4]. Pattnaik, B.S., Pattanayak, A.S., Udgata, S.K., Panda, A.K., Machine learningbased soft sensor model for BOD estimation using intelligence atedge. *ComplexIntell. Syst.* (2021). <https://doi.org/10.1007/s40747-020-00259-9> (IF: 3.791)
- [5]. A. S. Pattanayak, B. S. Pattnaik, S. K. Udgata and A. K. Panda, "Development of ChemicalOxygen on Demand (COD) Soft SensorusingEdge Intelligence," in *IEEE Sensors Journal*, doi: 10.1109/JSEN.2020.3010134.
- [6]. Real Time Monitoring of Water Quality in IoTenvironmentthrough Android Application, B S Pattnaik, AS Pattanayak, A K Panda, 2019.
- [7]. A. Kochar, B. S. Pattnaik and A. Kumar Panda, "Machine Learning applied in the Edge-Devices," *2018 International Conference on Networking, Embedded and Wireless Systems (ICNEWS)*, Bangalore, India, 2018, pp. 1-5, doi: 10.1109/ICNEWS.2018.8903952.
- [8]. I. Dalai, P. Mudali, A. S. Pattanayak and B. S. Pattnaik, "HourlyPrediction of LoadusingEdge Intelligence over IoT," *2019 11th International Conferenceon Advanced Computing (ICoAC), Chennai, India, 2019*, pp. 117-121, doi: 10.1109/ICoAC48765.2019.247127.
- [9]. Behera S., Pattnaik B.S., Reza M., Roy D.S. (2016) Predicting Consumer Loads for Improved Power Scheduling in Smart Homes. In: Behera H., Mohapatra D. (eds) *Computational Intelligence in Data Mining—Volume 2. Advances in Intelligent Systems and Computing*, vol 411. Springer, New Delhi. https://doi.org/10.1007/978-81-322-2731-1_44
- [10]. A. S. Patttanayak, B. S. Pattnaik and B. N. Panda, "Implementation of a smart grid system to remotely monitor, control and scheduleenergy sources using Android based mobile devices," *2014 9th International Conference on Industrial and Information Systems (ICIIS)*, Gwalior, 2014, pp. 1-5, doi: 10.1109/ICIINFS.2014.7036599.
- [11]. S. Mohanty, BikashNarayan Panda and Bhawani Shankar Pattnaik, "Implementation of a Web of Thingsbased Smart Grid to remotely monitor and control RenewableEnergy Sources," *2014 IEEE Students' Conference on Electrical, Electronics and Computer Science*, Bhopal, 2014, pp. 1-5, doi: 10.1109/SCEECS.2014.6804466.
- [12]. Ch. SreeKumar and Bhawani Shankar Pattnaik, "Miss rate analysis of cache oblivious matrix multiplication usingsequentialaccessrecursivealgorithm and normal multiplication algorithm," *2013 International Conference on Emerging Trends in Communication, Control, Signal Processing and Computing Applications (C2SPCA)*, Bangalore, 2013, pp. 1-6, doi: 10.1109/C2SPCA.2013.6749402.
- [13]. Presented a paper on "Modeling of an ARM Processor based Braille recognition devicebased on SVM classifier" in *ICHCI-2013* atSaveethaUniversity, Chennai.
- [14]. Presented a paper on the implementation issues in Bluetooth Protocol Development in *CIT-2001*.

PROFESSIONAL CERTIFICATIONS

- SUN Certified JAVA Programmer (SCJP)
- ORACLE Certified Associate (OCA)
- WIPRO Certified Embedded System Trainer
- SAP Certified SAP Trainer under SAP University Alliance Program

INVITED TALKS DELIVERED

- Delivered a talk on "Entrepreneurship Opportunity in IoT", as an invited speaker, During Odisha MSME International Trade Fair-2019.
- Delivered a Talk on "Rural Innovation" at XIMB, Bhubaneswar during "Workshop on Celebrating Innovation in Health & Sustainable Development"
- Delivered a Talk on "IoT enabled Smart Micro-Grid for Energy Accessibility" at OUAT, Bhubaneswar during "Workshop on Technology Justice"
- Delivered a lecture on "ICT in Telemedicine" in 6th Annual Conference of the Telemedicine Society of India, Odisha Chapter (ODITELECON-2017)

WORKSHOP SEMINARS ATTENDED

- Attended the conference and presented a paper in 5th ICRMR conference at Maldives in 2019.
- Attended Workshop on Excellence and Growth through NBA Accreditation System Organized by Aasaan Educare Foundation in month of January, 2017
- Attended Train the Trainer workshop on Innovative Research in Pedagogy for Mini-MOOCs blended with instruction strategies to enhance quality of Higher Education Organized by Thaper University and Royal Academy of Engineering.
- Attended 6th Annual Conference on "ICT in Telemedicine" (ODITELECON-2017) Organized by Telemedicine Society of India, Odisha Chapter in month of April, 2017
- Attended National Conference on Cloud Computing Organized by School Computer Science and Engineering, NIST in month of January, 2015
- Attended Workshop on Real time Embedded System Design for Signal Processing Application Organized by IEEE EDS Student chapter, NIST in month of July, 2013
- Attended International Conference on Human Computer Interactions (ICHCI'13), Organized by Saveetha University, IEEE in month of August, 2013
- Attended Workshop on Quality Initiative in Technical and Higher Education Institutions Organized by Engineering Staff College of India in month of January, 2012
- Attended ISTE workshop on Aakash for Education Organized by IIT, Bombay and NMEICT in month of November, 2012

- Attended SAP Academic Conference 2011 at Singapore, Asia Specific Organized by SAP Asia Specific, JAPAN in month of June, 2011
- Attended SAP Faculty Workshop on Business Process Integration Organized by SAP University Alliance Program in month of March, 2009
- Attended SAP Faculty Workshop on Business Intelligence Organized by SAP University Alliance Program in month of March, 2009
- Attended AICTE/MHRD Summer School on Application of ICT for Hardware Laboratory Organized by IIT Kharagpur in month of May, 2009
- Attended Workshop on "Embedded Systems and Their Applications" Organized by IEEE Calcutta Section in month of October, 2004
- Attended SJCP: Educational Activities Organized by IEEE Kolkata Section in month of November, 2003
- Attended National Seminar on Wireless Application Protocol Organized by GIET, Gunupur in month of September, 2001