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Designation : Assistant Professor

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

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RESEARCH INTERESTS

Experimental condensed matter Physics:

- ✓ Image Processing
- ✓ Pattern Recognition
- ✓ Machine learning
- ✓ Computer Vision

Academic Qualifications

Ph. D (CSE): OTR University (CET, BBSR), (BPUT, RKL), Odisha, India.

M. Tech (CSE): SOA University, BBSR, Odisha, India.

B. Tech (CSE): Biju Patnaik University of Technology (BPUT, RKL), Odisha, India.

Teaching Experience/Industrial Experience/Research Experience

- ✓ 11 years of Experience
 - Academic: 8 years
 - Research : 3 years

JOURNAL

- [1]. **Sethy, A.**, Patra, P. K., Nayak, S. R. (2022). A hybrid system for hand written character recognition with high robustness. *Traitement du Signal*, Vol.39, No.2, pp.567-576. <https://doi.org/10.18280/ts.390218>.
- [2]. Aguru, A. D., Babu, E. S., Nayak, S. R., **Sethy, A.**, & Verma, A. (2022). Integrated Industrial Reference Architecture for Smart Healthcare in Internet of Things: A Systematic Investigation. *Algorithms*, 15(9), 309.
- [3]. **Sethy, A.**, Patra, P. K., Nayak, S. R., & Poonia, R. C. (2022). Offline Handwritten Character and Numeral Recognition: A Kernel-Based Approach. *International Journal of Social Ecology and Sustainable Development (IJSESD)*, 13(1), 1-21. <http://doi.org/10.4018/IJSESD.295087>. (Scopus, wos).

- [4]. Rout, Ajit Kumar, **Abhisek Sethy**, and Soumya Ranjan Nayak. "Adaptive MLELM-AE model for efficient prediction of stock market data." *Journal of Statistics and Management Systems* 25, no. 7 (2022): 1541-1552.
- [5]. Yalla, S.P., Uriti, A., **Sethy, A.** (2022). GUI implementation of modified and secure image steganography using least significant bit substitution. *International Journal of Safety and Security Engineering*, Vol. 12, No. 5, pp. 639-643. <https://doi.org/10.18280/ijssse.120513>.
- [6]. Rout, Ajit Kumar, **Abhisek Sethy**, M. Ram Kumar, Md Fasi Ahamed, and S. Mohan. "Text Summarization Adaptive Models for Semantic Relevance Information: A Survey." *Specialusis Ugdymas* 1, no. 43 (2022): 10836-10844.
- [7]. **Abhisek Sethy**, Ajit Kumar Raut, "Employee Attrition Rate Prediction Using Machine Learning Approach", *Turkish Journal of Physiotherapy and Rehabilitation*; 32(3) ISSN 2651-4451 | e-ISSN 2651 446X
- [8]. Ajit Kumar Raut, **Abhisek Sethy**, "Self-Adaptive Social Spider Algorithm optimization for Solving Travelling Salesman Problem", *Turkish Online Journal of Qualitative Inquiry (TOJQI)* Volume 12, Issue 7, July 2021: 3577-3588.
- [9]. Nagaraju, V., **Abhisek Sethy**, Raja Sarath Kumar Boddu, S. Balambigai, and K. Sakthisudhan. "Diagnosed image of breast cancer by antenna MVDR beam forming algorithm with composites." *Materials Today: Proceedings* (2021).
- [10]. **Sethy, A.** and Patra, P.K., 2021, March. Discrete Cosine Transformation Based Approach for Offline Handwritten Character and Numeral Recognition. In *Journal of Physics: Conference Series* (Vol. 1770, No. 1). IOP Publishing.
- [11]. **A. Sethy** and P.K Patra "Off-line Odia Handwritten Characters Recognition: An Axis Constellation Model Based Approach" *International Journal of Innovative Technology and Exploring Engineering (IJITEE)* ISSN: 2278-3075, Volume-8, Issue- 9S2, July 2019.
- [12]. **A Sethy** and P. K Patra, "Optical Character Recognition of Odia Handwritten Scripts and Numerals: A Survey on Web Based Utility Application", *Journal of Web Engineering (SCI)*, Vol. 17, No.6 (2018) 3629 – 3653.
- [13]. **A Sethy**, P. K Patra and Deepak Ranjan Nayak, "Gray-Level Co-occurrence Matrix and Random Forest Based Off-line Odia Handwritten Character Recognition", *Recent Patents on Engineering (Scopus)* (2018) 12: 1. <https://doi.org/10.2174/1872212112666180601085544>.
- [14]. **A Sethy**, P.K Patra, D. R. Nayak, and S. R. Nayak, "A Gabor Wavelet Based Approach for Classification of Handwritten Odia Numerals",

International Journal of Engineering & Technology, (Scopus) 7(2.32),253-257,2018.

- [15]. **A. Sethy**, P.K Patra, and S.R Nayak, "Ripplelet Transformation Based Off-Line Handwritten Character & Numeral", Journal of AdvResearch in Dynamical & Control Systems, Vol. 10, No. 5, 2018. (Elsevier, Scopus).
- [16]. S.R. Nayak, J. Mishra, **A. Sethy** and S. K. Mohapatra, "A Comparative Analysis on Estimation of Fractal Dimension of Grey Scale Images", International Journal of Pure and Applied Mathematics (Scopus) Volume 117 No. 19 2017, 323-329.

CONFERENCES

- [1]. **A. Sethy**, and P.K Patra, "Off-line Odia Handwritten Numeral Recognition Using Neural Network: A Comparative Analysis", IEEE Conference Computing, Communication and Automation (ICCCA), pp.1099-1103, 2016.
- [2]. **A. Sethy**, P.K Patra, P. M Jena, and S. R. Nayak, "Symmetric Axis Based Offline Odia Handwritten Character and Numeral Recognition", IEEE Conference on Computational Intelligence and Networks(CINE), pp. 83-87, 2017.
- [3]. **Abhisek Sethy**, P.K Patra, R.K Nayak, D. Sahoo, "Transform Based Approach for Handwritten Character and Numeral Recognition: A Comprehensive Approach" <https://ssrn.com/abstract=3708702>.
- [4]. Nayak, R. K., Tripathy, R., Mishra, D., Burugari, V. K., Selvaraj, P., **Sethy, A.**, & Jena, B.(2021). Indian Stock Market Prediction Based on Rough Set and Support Vector Machine Approach. In *Intelligent and Cloud Computing*(pp.345-355).Springer, Singapore.
- [5]. **Sethy, A.**, Patra, P. K., & Nayak, S. R. (2022). A Deep Convolutional Neural Network-Based Approach for Handwritten Recognition System. In *Computational Intelligence in Pattern Recognition*(pp.607-617). Springer, Singapore.
- [6]. Sarangi, P. K., Sahoo, A. K., Nayak, S. R., Agarwal, A., & **Sethy, A.** (2022). Recognition of Isolated Handwritten Gurmukhi Numerals Using Hopfield Neural Network. In *Computational Intelligence in Pattern Recognition* (pp. 597-605).Springer, Singapore.

- [7]. A. K. Rout, **A. Shety** and K. Modekurti, "Counterfeit Regulation through Machine Learning Approach and Deployment in Dockers," *2022 12th International Conference on Cloud Computing, Data Science & Engineering (Confluence)*, 2022, pp.500-507, doi:10.1109/Confluence52989.2022.9734203.
- [8]. **A. Shety**, A. K. Raut and S. R. Nayak, "Face Recognition Based Automated Recognition System," *2022 12th International Conference on Cloud Computing, Data Science & Engineering (Confluence)*, 2022, pp.543-547, doi:10.1109/Confluence52989.2022.9734135.
- [9]. **Abhisek Shety**, Chandra Gunda, Sai Pranavi Pothuri, Sai Kiran Routhu, Srinu Kallepalli, Geetha Garbhapu "Book Genre Classification system Using Machine Learning Approach: A Survey" in the *5th International Conference on Sift Computing and Signal Processing Springer (ICSCSP-2022)*, 2022.

ANY OTHER

BOOK CHAPTER

- [1]. **A. Shety**, P.K Patra and D.R Nayak, "Offline Odia Character Recognition using DWT and PCA", In proceeding to Progress in Advanced Computing and Intelligent Engineering, Springer, Singapore, 187-195, 2018.
- [2]. **A. Shety**, P.K Patra and D.R Nayak, "Offline Odia Handwritten Characters Recognition : A Hybrid Approach", In proceedings to Computational Signal Processing and Analysis, Springer, Singapore, pp. 247-257, 2018.
- [3]. **A. Shety** and P. K Patra, "R-HOG Feature Based Offline Odia Handwritten Character Recognition", DOI:10.4018/978-1-7998-0066-8.ch010, Examining Fractal Image Processing and Analysis, IGI GLOBAL, 2019.
- [4]. **Abhisek Shety**, P.K Patra, S.R Nayak, "Offline Handwritten Numeral Recognition Using Convolution Neural Network" Machine Vision Inspection Systems: Image Processing, Concepts, Methodologies and Applications, Wiley. <https://doi.org/10.1002/9781119682042.ch9>.

PATENT

- [1]. **Patent Title : Design of an Real Time Smart Health Care System Through Data Mining.**
Patentee Names: Dr. Dinesh Kumar, Dr. P. Eswaran, Dr. D. Daniel, Dr.

Satyadhyan Chickerur, **Abhisek Sethy**

Patent Application Number: 201941041826

Date of Publication: 25/10/2019

[2]. **Patent Title: Motivational Recommendation System And Method**

Patentee Names: Dinesh Kumar Anguraj, Deepak V, R. S. Raghav, **Abhisek Sethy**, Kalai priyan Thirugnanasambandam

Patent Application Number: 201941041826

Date of Publication: 20/03/2020

[3]. **Patent Title: Breast Cancer Prediction System And Method For Early detection**

Patentee Names : Dr. Shahina Parveen M, Syed Thouheed Ahmed, Dr. S. Sreedhar Kumar, M. Ramkumar, **Mr. Abhisek Sethy**, Mr. S. S. Aravinth, Dr. M. Rameshkumar

Patent Application Number: 202041021242

Date of Publication: 05/06/2020

[4]. **Patent Title: An Artificial Intelligence Based System For Detection Of Covid Influence On Human Skin**

Patentee Names : Arjunagi, Shravan kumar; Biradar, Siddalingap pagouda Dr; Chandnani, Neeraj; G., Pavithra Dr; H, Girish Dr; Jose, Deepa Dr; Malathi, P. SreeRathna; Madiwal, Shweta M; Manjunath, T.C. Dr; Meena, Mamta Dr; Perugu, Prathusha Dr; Ranjani, R Dr; Sekhar, Ch.Punya Dr; **Sethy, Abhisek**; Sirisha, G.; Urkude, AshishManohar Dr; Urkude, Mrs SurekhaAshish

Patent Application Number: 2021102184

Date of Grant : 01-07-2021.

[5]. **Patent Title: Method for Minimizing the Battery Power Usage in Mobile Ad Hoc Networks**

Patentee Names : A., Asha; Ganesan, Manikandan; Guttula, Ramakrishna; John, Pradeep; K.R, Ishwarya; Mondal, Sanjoy; P.T., Kalaivaani; Sattaru, Naveen Chakravarthy; **Sethy, Abhisek**; T., Subramani

Patent Application Number: 2021102440

Date of Grant: 24/06/2021.

[6]. **Patent Title: Smart Helmet granted**

Patentee Names : Dr. Srinivas Prasad, Dr. Soumya Ranjan Nayak, Prof.(Dr.) Sunil Kumar Dhal, Dr. Saraju Prasad, Dr. Sudhir Kumar Mohapatra, **Abhisek Sethy**, Jaskirat Kaur, Dr. Manas Ranjan Senapati, A Ambikapathy, Yogesh Kumar, Brijesh Kumar

Patent Application Number: 353451-001

Date of Publication: 07/01/2022

[7]. **Patent Title : A System With Deep Learning And Internet Of Things- Based Investigation And Evaluation Of Algorithms For Analyzing Athletic Health Records.**

Patentee Names : **Dr. Abhisek Sethy**, Dr. Ravu Kumar Poluru, Dr. Vijendra Pratap Singh, Mr. Ambui Kumar Misra, Ms. Nandita

Manavar, Mr. S Yuvraj, Mr. Kothapalli Ramesh Chandra, Dr. Sanjeev Kumar, Ms. Thilagavathi T, Mr. Anil Kumar Gona.

Patent Application No : 202331003466

Date of Publication: 20.01.2023