

Pangambam Sendash Singh

M.Sc. (Computer Science), UGC-NET (JRF), Ph.D. (Computer Science)

Assistant Professor (Computer Applications) at Manipal University Jaipur

@ pangambam.singh@jaipur.manipal.edu

+91 8014 391 934

0000-0001-5313-9469



Educational Background

- 2022** **Doctor of Philosophy (Computer Science)**
Banaras Hindu University, Varanasi
Thesis title: *Machine Learning Based Efficient Approaches for Improving the Performance of Multi-faceted Hyperspectral Imaging Applications*
- 2015** **Master of Science (Computer Science)**
Banaras Hindu University, Varanasi
- 2012** **Bachelor of Science (Physics (Hons.) with Computer Science and Mathematics)**
D.M. College of Science (Manipal University), Imphal

Academic Achievements

- State subject topper in Computer Science (97%) securing all Manipur 20th Position in Higher Secondary Examination (Science) conducted by Council of Higher Secondary Education, Manipur in the year 2009.
- Awarded INSPIRE Scholarship for Higher Education by Department of Science and Technology, GoI (2009-2013).
- Awarded State Merit Scholarship by Department of Education (S), Government of Manipur (2009-2010).
- Recipient of (Late) N. Lakhi Devi Memorial Gold Medal for securing highest marks in Computer Science for D.M. College of Science, Imphal in B.Sc. Degree in the year 2012.
- Qualified GATE in Computer Science and Information Technology (2015).
- Qualified UGC-National Eligibility Test (NET) in Computer Science and Applications (June 2015).
- Awarded Junior Research Fellowship (NET-JRF) in December 2015 and subsequently Senior Research Fellowship by the University Grants Commission (UGC), New Delhi, India.

Work Experience

Assistant Professor (January 2024 – present)
Department of Computer Applications, Manipal University Jaipur
Roles: Teaching & Research.

Postdoctoral Researcher (August 2022 – January 2024)
Institut Català d'Arqueologia Clàssica (ICAC), Tarragona (Spain)
Project: Mapping Archaeological Heritage in South Asia (MAHSA)
Roles: Investigating novel machine learning algorithms to automatically detect archaeological heritage sites using data obtained from multiple satellite imageries.

List of Publications

- **Papers published in peer-reviewed indexed journals:**
Main publications:
 1. Singh, Pangambam Sendash & Subbiah Karthikeyan (2022). "Enhanced classification of remotely sensed hyperspectral images through efficient band selection using autoencoders and genetic algorithm." *Neural Computing and Applications*, 34, 21539–21550. Springer. doi: 10.1007/s00521-021-06121-4 (SCIE, Impact Factor: 6.0)
 2. Singh, Pangambam Sendash & Subbiah Karthikeyan (2022). "Salient object detection in hyperspectral images using deep background reconstruction based anomaly detection." *Remote Sensing Letters*, 13(2), 184–195. Taylor & Francis. doi: 10.1080/2150704X.2021.2005270 (SCIE, Impact Factor: 2.3)
 3. Singh, Pangambam Sendash, Vijendra Pratap Singh, Manish Kumar Pandey & Subbiah Karthikeyan (2021). "Enhanced classification of hyperspectral images using improvised oversampling and undersampling techniques." *International Journal of Information Technology*. Springer. doi: 10.1007/s41870-021-00676-0 (Scopus, IF: NA)
 4. Singh, Pangambam Sendash, Vijendra Pratap Singh, Manish Kumar Pandey & Subbiah Karthikeyan (2020). "Local Binary Ensemble based Self-training for Semi-supervised Classification of Hyperspectral Remote Sensing Images." *Computación y Sistemas*, 24(2), 497–509. doi: 10.13053/CyS-24-2-3374 (Scopus, ESCI, Impact Factor: 0.6)

[Please turn over]

Collaborations:

5. Nath, Abhigyan, Rathore, Sudama, & Singh, Pangambam Sendash (2023). "Exploiting ensemble learning and negative sample space for predicting extracellular matrix receptor interactions." *Mathematical Biology and Bioinformatics*, 18(1), 113–127. doi: 10.17537/2023.18.113 (Scopus, IF: NA)
6. Singh, Vijendra Pratap, Manish Kumar Pandey, Singh, Pangambam Sendash & Subbiah Karthikeyan (2020). "An LSTM Based Time Series Forecasting Framework for Web Services Recommendation." *Computación y Sistemas* 24(2), 687–702. doi: 10.13053/CyS-24-2-3402 (Scopus, ESCI, Impact Factor: 0.6)

• Conference Proceedings:

1. Singh, Pangambam Sendash, Vijendra Pratap Singh, Manish Kumar Pandey & Subbiah Karthikeyan (2020). "One-class Classifier Ensemble based Enhanced Semisupervised Classification of Hyperspectral Remote Sensing Images." *International Conference on Emerging Smart Computing and Informatics (ESCI)*, 2020, (pp. 22–27). IEEE Xplore., doi: 10.1109/ESCI48226.2020.9167650.
2. Singh, Vijendra Pratap, Manish Kumar Pandey, Pangambam Sendash Singh & Subbiah Karthikeyan. "Neural Net Time Series Forecasting Framework for Time-Aware Web Services Recommendation." *Third International Conference on Computing and Network Communications (CoCoNet'19)*, Procedia Computer Science 171, (2020): 1313–22. doi: 10.1016/j.procs.2020.04.140
3. Singh, Vijendra Pratap, Manish Kumar Pandey, Pangambam Sendash Singh & Subbiah Karthikeyan. "An Econometric Time Series Forecasting Framework for Web Services Recommendation." *International Conference on Computational Intelligence and Data Science ICCIDS 2019*, Procedia Computer Science 167, no. ICCIDS 2019 (2020): 1615–25. doi: 10.1016/j.procs.2020.03.372

• Book Chapter:

1. Singh, Vijendra Pratap, Pandey Manish Kumar, Singh, Pangambam Sendash & Karthikeyan Subbiah. "An Empirical Mode Decomposition (EMD) Enabled Long Short Term Memory (LSTM) Based Time Series Forecasting Framework for Web Services Recommendation." *Frontiers in Artificial Intelligence and Applications, Vol: 320 Fuzzy Systems and Data Mining V* (2019), 715–723. doi: 10.3233/FAIA190241

Research Area

- Data Mining
- Machine Learning
- Deep Learning

Technical Skills

- **Programming Languages:** C, MATLAB, Python (Currently exploring)
- **Document Preparation Systems:** Latex, Beamer, MS Word
- **Machine Learning Tools/Simulators:** Weka
- **Application Software:** MS Office, Adobe Photoshop
- **Web Design Languages:** HTML, CSS

Personal Details

| | |
|----------------------------|---|
| Father's name: | Pangambam Ibomcha Singh |
| Mother's name: | Pangambam Sumobala Devi |
| Date of birth: | 01/02/1992 |
| Permanent address: | Poiroukhongjin Kaina Road P.O. Thoubal, Imphal East District Manipur - 795138, India. |
| Nationality: | Indian |
| Marital status: | Married |
| Linguistic ability: | Manipuri (Mother Tongue), Hindi (Fluent), English (Good) |
| Hobbies: | Singing, playing musical instruments and writing poems. |

Referees

Prof. S. Karthikeyan (Ph.D.)
Department of Computer Science
Banaras Hindu University, Varanasi, India
Email: karthik@bhu.ac.in
Phone: +91 9473967721

Dr. Kh. Robindro (Ph.D.)
Department of Computer Science
Manipur University, Imphal, India
Email: rbkh@manipuruniv.ac.in
Phone: +91 9485044453

Dr. T. Sonamani (Ph.D.)
Department of Physics
NIT Tiruchirappalli, Tamil Nadu, India
Email: takhel@nitt.edu
Phone: +91 7054239807