

Dr. Sagar Deep Deb

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EDUCATION

Indian Institute of Technology Patna

PhD in Electrical Engineering;

Patna, Bihar, India

July 2019 – May 2024

National Institute of Technology Silchar

MTech in Communication and Signal Processing; **GPA: 8.82/10**

Silchar, Assam, India

June 2017 – June 2019

North Eastern Regional Institute of Science and Technology

BTech in Electronics and Communication Engineering; **GPA: 3.60/5**

Nirjuli, Arunachal Pradesh, India

June 2012 – May 2016

EXPERIENCE

University of Petroleum and Energy Studies (UPES)

Assistant Professor, School of Computer Sciences

Dehradun, Uttarakhand, India

September 2025 – Present

Indian Institute of Technology Bombay

Institute Post Doctoral Fellow, Department of Biosciences and Bioengineering

Mumbai, Maharashtra, India

June 2024 – September 2025

SKILLS

Programming: Python, Keras, MATLAB, R

Languages: Bengali (Native), English (Professional), Hindi (Professional)

PUBLICATIONS (JOURNALS)

- **Sagar Deep Deb**, Suvakash Dey, & Deepak K. Agrawal (2026). Synthesis of ventilator dyssynchrony waveforms using a hybrid generative model and a lung model. *Biomedical Signal Processing and Control*, 117, 109452.
- Arjun Abhishek, **Sagar Deep Deb**, Rajib Kumar Jha, Ruchi Sinha, & Kamlesh Jha (2025). Ensemble learning using Gompertz function for leukemia classification. *Biomedical Signal Processing and Control*, 100, 106925.
- **Sagar Deep Deb**, and Rajib Kumar Jha. “Segmentation of Pectoral Muscle from Mammograms using U-Net having Densely Connected Convolutional Layers.” *Multimedia Tools and Applications* (2023): 1-22.
- **Sagar Deep Deb**, and Rajib Kumar Jha. “Breast Ultra Sound Image Classification using Fuzzy-Rank-Based Ensemble Network.” *Biomedical Signal Processing and Control* 85 (2023): 104871.
- **Sagar Deep Deb**, and Rajib Kumar Jha. “Modified Double U-Net Architecture for Medical Image Segmentation.” *IEEE Transactions on Radiation and Plasma Medical Sciences* (2022).
- **Sagar Deep Deb**, Rajib Kumar Jha, Kamlesh Jha, and Prem S. Tripathi. “A multi model ensemble based deep convolution neural network structure for detection of COVID19.” *Biomedical Signal Processing and Control* 71 (2022): 103126.

PUBLICATIONS (CONFERENCES)

- **Sagar Deep Deb**, Rajib Kumar Jha, and Sudhir Kumar. “ConvPlant-Net: A Convolutional Neural Network Based Architecture for Leaf Disease Detection in Smart Agriculture.” In 2023 National Conference on Communications (NCC), pp. 1-5. IEEE, 2023.
- **Sagar Deep Deb**, Arjun Abhishek, and Rajib Kumar Jha. “2-Stage Convolutional Neural Network for Breast Cancer Detection from Ultrasound Images.” In 2023 National Conference on Communications (NCC), pp. 1-5. IEEE, 2023.
- Arjun Abhishek, **Sagar Deep Deb**, and Rajib Kumar Jha. “Effective WBC Segmentation using Hybrid Loss.” In 2023 National Conference on Communications (NCC), pp. 1-5. IEEE, 2023.
- **Sagar Deep Deb**, Rajib Kumar Jha, Yash Talera, Prem S. Tripathy, Simran Agrawal and Kamlesh Jha, “Survival prediction of COVID-19 patients using multi-modal dataset,” 2022 IEEE 19th India Council International Conference (INDICON), pp. 1-6. IEEE, 2022
- **Sagar Deep Deb**, Chandrait Choudhury, Manish Sharma, Fazal Ahmed Talukdar, and Rabul Hussain Laskar. “Frontal facial expression recognition using parallel CNN model.” In 2020 National Conference on Communications (NCC), pp. 1-5. IEEE, 2020.

AWARDS & ACHIEVEMENTS

Best paper award at International Conference on Signal Processing, Computation, Signal Processing, Power and Telecommunication (IConSCET) held at National Institute of Technology Puducherry (2023)

Travel Grant for Graduate Students' Day National Conference on Communications, 2023, IIT Guwahati

Institute fellowship grant from MHRD, Govt. of India:

RELEVANT COURSEWORK

Major coursework: Signal Processing, Machine Learning, Digital Image Processing, Deep Learning, English Communications.

Minor coursework: Artificial Intelligence, Image and Video Processing.

REFERENCES

Dr. Rajib Kumar Jha Associate Professor, Department of Electrical Engineering, Indian Institute of Technology Patna. email id: jharajib@iitp.ac.in; Phone no: +91-98011XXXXX

Dr. Deepak Kumar Agrawal, Assistant Professor, Department of Biosciences and Bioengineering, Indian Institute of Technology Bombay. email id: dkagrawal@iitb.ac.in; Phone no: +91-90069XXXXX

Dr. Chandrajit Choudhury Assistant Professor, Department of Electronics and Communication Engineering, National Institute of Technology Silchar. email id: chandrajit@ece.nits.ac.in; Phone no: +91-98337XXXXX