



High-End Workshop on: Machine Learning and Deep learning Algorithms for Human Disease Diagnosis and Classification with Hands on

(Under the KARYASHALA Scheme - A SERB initiative)

8th March – 14th March 2024

Patron: Prof. T.N. Singh, Director, IIT Patna



Organized by

Dr. Rajib Kumar Jha, Associate Professor

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Bihta, Bihar:- 801106

About IIT Patna

Indian Institute of Technology Patna, established in August 2008, is an autonomous institute of education and research in science, engineering, and technology located in Bihta, 35 km from Patna. The new campus is spread over 500 acres of green land. IIT Patna has ten academic departments that offer B.Tech, M.Tech, MSc, and Ph.D. programs. The faculty members of this institute come with academic and research training from various institutes of excellence within the country and abroad. The recent publication records of the faculty members is commendable.

It includes many reputed national and international journals. Research activity in IIT Patna has been published in high-quality and peer-reviewed national and international journals. Faculty members of IIT Patna have been also participating in national and international conferences of repute.

Objective

1. To provide a rich knowledge of recent deep learning algorithms explored for different biomedical systems
2. Design steps overview of development of different biomedical systems including data acquisition, algorithms development, evaluation and validation, implementation in real-time hardware
3. Hands on sessions to enhance coding skills of the participants to develop such systems
4. Knowledge distribution for the developed biomedical systems to optimize several constraints including computation and communication power, low latency output, generation of critical alarms based on significant events.

Contents

- Recent Trends in Machine Learning and Deep Learning
- Introduction to Different Disease Diagnosis
- Basics of Machine and Deep Learning and Different Deep Learning Algorithms
- Deep learning for Medical Image Analysis and Python Implementation in Google Colab
- Pathological Signal Analysis and Lab Implementation
- Deep Learning for Medical Imaging
- Real-Time Biomedical Systems Development
- Lab Implementation of Real-Time Deep Learning Algorithms for different Disease Diagnosis

Total number of participants is limited to 25. Boarding, lodging, and travel support (train-AC-III only) will be provided to all the 25 selected participants. Participation Certificates will be given to the candidates who will attend the workshop.

To register apply on the below google link-
<https://forms.gle/9ftBKaNgGvgkrWAR6>

**Registration fee- INR 3000/-
Accepted through e-transfer/RTGS/NEFT.**

Details for Online Payments:

Name of the Account: IIT Patna

Bank: State Bank of India,

Branch: IIT Patna, Bihta

Bank Account No.: 30957551934

MICR Code: 801002005

Swift code: SBININBB156

Beneficiary: Indian Institute of Technology Patna

Bank Telephone: 0612-3028062

IFSC: SBIN0017164

Account Type: Savings A/c