TEQIP-III Sponsored Short-Term Course on Artificial Intelligence Driven Biomedical Data Analysis for Disease Diagnosis

05 Days (05-07 & 09-10 November, 2020)



Discipline of Electrical Engineering & Discipline of Mathematics

Indian Institute of Technology Indore

Course Coordinators

Prof. Ram Bilas Pachori Dr. M. Tanveer

Course Contents:

This short term course will provide theories and applications of signal processing and machine learning algorithms for biomedical data analysis and classification. Various applications of these designed systems based on artificial intelligence for computer-aided medical diagnosis will be provided. The various methods for biomedical data analysis and classification will be covered. The computer-aided diagnosis systems designed for diagnosis of various diseases like as brain diseases, heart diseases, eye diseases, muscular diseases, etc will be covered. The various features extraction techniques based on signal processing and machine learning algorithms will be explained. The methods for early detection of various diseases based on signal processing and machine learning will be covered.

The lectures will cover following contents:

- SVM Based algorithms for classification problems
- SVM Based algorithms for regressions problems
- SVM Based algorithms for large scale data
- Reduced SVM for class imbalance problems
- Advanced machine learning algorithms for clustering data
- Applications of advanced SVM algorithms to health care
- Data mining approaches for biomedical data
- Big data analytics for health care
- Hierarchical Reinforcement Learning
- Transfer learning for biomedical data
- Advanced signal processing for medical data analysis
- Automated classification of ECG signals
- Automated classification of EEG signals
- Internet of things for medical applications
- Medical and healthcare human factors
- Human emotion detection
- Computer-aided medical diagnosis
- Healthcare monitoring
- Diagnosis of diseases based on signal processing and machine learning
- Automated classification of medical images

Who should attend?

- Professionals working in R & D organizations and industries.
- Faculty from Engineering/Polytechnic colleges.
- Research scholars, post graduate and undergraduate students

Course Fees:

No registration fee for faculty members from TEQIP institutes

• Rs. 10,000^{*} (for industry personnel)

- Rs. 6,000^{*} (for faculty members)
- Rs. 3,000^{*} (for students)

*including service tax

Mode of Payment:

For Online Payment

http://www.iiti.ac.in/page/e-payments

Bank Transfer:

Beneficiary Name: Registrar IIT Indore Bank Name: Canara bank Branch: IIT Indore, Khandwa Road,Simrol, Indore Account number: 1476101027440 IFS Code: CNRB0006223

Number of Seats: Limited

Important Dates:

The soft copy of completely filled registration form (along with online payment slip for the course fee) should be sent to the following e-mail ID on or before 03 November, 2020.

Address for correspondence:

Prof. Ram Bilas Pachori Discipline of Electrical Engineering Indian Institute of Technology Indore Khandwa Road, Simrol, Indore, MP. E-mail: pachori@iiti.ac.in Phone: 09617291052 (Mobile)

REGISTRATION FORM

(Please fill and send through e-mail)

	Name:
	Designation:
	Institution/Organization:
	Address:
ore	Are you a faculty member from TEQIP Institute? (Yes or No)
	E-mail id:
	Phone/Mobile No.:
	Payment details (for participants from non TEQIP institutes)
	Bank Name:
on form (along with ould be sent to the 2020.	Reference ID:
	Amount transferred:
	Date of transaction:
	Any other relevant information:

Signature of the applicant with date