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DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Department of Computer Science & Engineering, NIT, Rourkela was established in 1982. Since its inception, the Department is under dynamic progress and is able to establish the reputation for imparting quality education both at undergraduate and graduate programmes. The department has well equipped modern laboratories such as Software Engineering, Distributed Object Systems, Information Security & Data Communication, Image Processing & Cluster Computing and Advanced Database Engineering Labs for pursuing research keeping in view of the technological advancement.

FTBI-SDC

Skill Development Cell under FTBI is a hub of activities to enhance the skill/knowledge for better employability and output. FTBI is a rising incubation center of eastern India.

Skill Development Programme

on

ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

(AIML- 2023)

9th – 14th October 2023

Conveners
Prof. Anup Nandy
Prof. Ratnakar Dash

Chairman
Prof. Durga Prasad Mohapatra

Organized by
Department of Computer Science & Engg

in association with

Skill Development Cell,
Foundation for Technology & Business Incubation (FTBI-SDC)

National Institute of Technology
Rourkela-769 008, Odisha
http://www.nitrkl.ac.in
https://www.ftbi-nitrkl.org/

ABOUT THE WORKSHOP

This workshop intends to provide an insightful discussion on recent trends of Artificial Intelligence and Machine Learning techniques. The applications of AI and ML techniques are gaining importance in numerous fields on engineering, health care, space science, production, safety, administration, etc. This workshop will focus on basic AI and machine learning techniques with real-life problem-solving ability. The purpose of this workshop is to discuss fundamental of AI algorithms with perception and action in the light of interactive training session. The scientists, engineers, faculties and researchers who are working in this area, will be benefited to know about different AI and ML methods in diversified applications.

This workshop will provide a forum for discussing theoretical and practical aspects of basic AI and ML algorithms. It will help in exchanging research ideas and challenges, exploring possible solutions and future directions. The main goal of this workshop is to bring together researchers & practitioners from both academia & industry.

INVITED TALKS

The workshop mainly includes invited lectures on recent advances in AI and ML techniques. The invited talks will be delivered by NIT Rourkela faculty only.

CONTENTS OF THE FDP

1. Introduction to Artificial Intelligence
   - What is AI
   - What are Intelligent Machines and What machines can do
   - The history of AI and foundations of AI
2. Basic Search Algorithms (Uninformed Blind Search)
   - Breadth-first Search
   - Depth-first Search
   - Uniform Cost Search
   - Iterative Deepening and Bidirectional Search
   - Branch-and-Bound Search
   - Greedy search
   - Hill climbing
   - Best-first search and A* search, Heuristics
3. Expert System Applications with AI Techniques
4. Introduction to Machine Learning
   - Types of Machine Learning techniques (Supervised, Unsupervised and Semi-supervised)
   - Performance measures of ML Models
5. Understanding different Discriminative Models
   - Least Square Regression Method (Single and Multivariate)
   - Gradient Descent Algorithm
   - Probabilistic Interpretation for Prediction Models
6. Dimensionality Reduction and Unsupervised Learning
   - Principal Component Analysis and Linear Discriminant Analysis
   - K-Means Clustering Algorithm
   - Agglomerative Clustering Methods
7. Applications of ML Techniques

REGISTRATION & FEE PARTICULARS

Applications in the prescribed format must reach the Convener on or before 3rd October 2023. The registration fee as mentioned below must be deposited in the FTBI account as per the following details. (FTBI is exempted from GST)

Bank Account No: 38997871030
Account Name: FTBI, NIT Rourkela
IFSC Code: SBIN 000 2109

Registration fee includes workshop materials and working lunch. Accommodation may be provided in institute guest house/hostels on payment basis. For accommodation, participants have to mention it in application form & may request through email.

Registration Fee

Employees from Industry and R&D Org.	₹ 8,000.00
Faculty from Academic Institutions	₹ 6,000.00

Accommodation Charges (per day per bed)

Guest House (South block)	₹ 1064.00
Hostel	₹ 200.00

For details, please visit:

https://www.ftbi-nitrkl.org/importantdates

Skill Development Programme on

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Registration Form

1. Name:……
2. Designation: ……
3. Organization: ……
4. Specialization: ……
5. Address:……

   ……

   Phone:…… Mob: ……

   Email:……
6. Accommodation Required: YES/NO [Guest house/Hostel]
7. Gender: Male/Female
8. Registration Fee Details:

   Amount: Rs ……

   Transaction id/DD No: ……

   If DD, it should be drawn in favour of *FTBI-NIT Rourkela,* Branch: SBI Code 02109

Place:

Date: Signature of the Applicant

Copies of this form can be made, if necessary. Please send the duly filled in form to the Convener on or before 3rd October 2023. **Participants can register online from the following link**:

https://www.ftbi-nitrkl.org/importantdates