ABOUT THE COURSE

This Internship programme intends to provide an insightful discussion on recent trends of Artificial Intelligence and Machine Learning techniques. The applications of AI and ML techniques are enormous in many fields such as software engineering, bio-informatics, medical engineering, robotics, computational imaging, computational neurosciences etc. It will focus on basic AI and machine learning techniques with real-life problem-solving ability. The purpose of this internship 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.

COURSE CONTENT

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. Introduction to Machine Learning
   - What is Machine Learning
   - Types of Machine Learning techniques (Supervised, Unsupervised and Semi-supervised)
   - Performance measures of Machine Learning Models.

COURSE CONTENT

3. Expert Systems Applications with AI Techniques
4. Understanding different Discriminative Models
   - Least Square Regression Method (Single and Multivariate)
   - Gradient Descent Algorithm
   - Probabilistic Interpretation for Prediction Models
5. Dimensionality Reduction and Unsupervised Learning
   - Principal Component Analysis and Linear Discriminant Analysis
   - K-Means Clustering Algorithm
   - Agglomerative Clustering Methods

This internship 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 internship is to bring together researchers & practitioners from both academia & industry.

Short Term Course
on

MACHINE LEARNING & ITS APPLICATIONS (ML- APP 2024)

(Hybrid Mode)

27TH – 31ST MAY 2024

Chairman
Prof. Bibhudutta Sahoo, HoD (CS)

Convener
Dr. Anup Nandy
Dr. Ratnakar Dash

Department of Computer Science and Engineering
National Institute of Technology
Rourkela-769008, Odisha

ABOUT NIT ROURKELA

National Institute of Technology (NIT) Rourkela is an institution of national importance funded by the Ministry of Education. NIT Rourkela was established as Regional Engineering College (REC) on August 15, 1961. In India, it was ranked 16 among engineering colleges by the National Institutional Ranking Framework (NIRF) in 2023. For details about the institute please visit us at www.nitrkl.ac.in.

ABOUT 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 also offers Ph. D. for regular as well as sponsored candidates. Please visit https://website.nitrkl.ac.in/CS/ to know more about the Department of CSE. 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.

TARGET PARTICIPANTS

The short-term course is of immense interest for UG/ PG students, research scholars/professionals, staff/ faculty members and industry professionals working in the area of Data Science. The participants from different Science and Engineering (Computer Science and Engineering, Electronics and Communication Engineering, Electrical Engineering, etc.) background will be benefitted with this course.

IMPORTANT DATES

Registration Starts	25th February 2024
Registration Ends	10th May 2024
Maximum Offline Participants (First Come First Serve Basis)	60
Registration Confirmation	15th May 2024
Course Schedule	27-31ST May 2024

PREREQUISITES

1. The offline participants should bring their laptop.
2. Basics of programming language and data structure will be a plus.

TOURIST PLACES NEARBY

Khandadhar Waterfall

Pitamahal Dam

Vedvyas Temple

Mandira Dam

REGISTRATION & FEE PARTICULARS

Registration Fee	
Students	Rs. 1,180/-
Faculty from Academic Institutions	Rs. 2,360/-
Employees from Industry and R&D Organizations	Rs. 3,540/-
Accommodation Charges	
Guest house (South / North block)	As Per Institute Norms
Hostel (for students)	

Registration fees include Registration Kit, Refreshment, Tea and Snacks and 18% GST. (Lodging, boarding, lunch and dinner facility can be availed on separate payment basis and based on availability.)

BANK ACCOUNT DETAILS FOR REGISTRATION

Account Name:	CONTINUING EDUCATION NIT ROURKELA
Account No.:	10138951784
Bank Name	State Bank of India(002109)
Branch:	NIT Rourkela Campus
IFSC Code	SBIN0002109

REGISTRATION FORM

To complete the online registration, the participants need to fill the following google form:

Click here for the Google Form Registration Link

Patron	Prof. K. Umamaheswar Rao, Director, NIT Rourkela
Chairman	Prof. Bibhudatta Sahoo
Convener	Dr. Anup Nandy & Dr. Ratnakar Dash

Correspondence
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Assistant Professor & Convener, ML-App **2024**
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E-mail: nandya@nitrkl.ac.in

STUDENT COORDINATORS

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