Proposal for Short Term Training

On

Rapid Prototyping for IoT: An Immersive Workshop with single board computers.

Date of commencement: 20th June 2024

This course delves into the methodology of Internet of Things (IoT) device development. You'll gain a strong foundation in single-board computers, their interaction with various sensors and actuators, and programming for cloud-based data transmission. Hands-on practical training sessions will solidify your understanding of these concepts.

Training Outcome:

Students learn IoT device development and prototyping

Duration: 4 weeks(40hr) + Project

Course Fee: Rs. 5000/-(inclusive all taxes)

Eligibility: B. TECH. 2nd Year or 3rd year

Mode: Hybrid Mode (Theory will be in online mode and hands-on in offline mode in university campus)

Week1: Internet of Things

- IoT & IoE, its applications
- Sensors
- Actuators
- Networks
- Development boards

Week 2: IoT Platform Design methodology

- IoT design templates
- IoT Platform design I
- IoT Platform design II
- Case Studies/Use Cases
- Raspberry Pi Fundamentals

Week 3: Rapid Prototyping using Raspberry Pi

- Installing OS on Raspberry Pi 4

- SSH fundamentals and access to Rpi/Linux commands/configuration
- Interfacing sensors
- Interfacing actuators
- Sending and receiving data to cloud

Week 4: Rapid Prototyping using using Rugged Board

- Microchip SOM
- Rugged Board fundamentals
- MRAA and UPM
- Interfacing sensors and actuators
- Evaluation/Submission

Evaluation:

Online class participation will be evaluated through Zoom polling responses during lecture delivery. Hands-on activities in the Microchip Center of Excellence Lab will be assessed through project submissions.

Certificates will be issued to students achieving a score of more than 60%.

Instructor:

Dr. Deepak Kr. Rout

Assistant Professor,
School of Electronics Engineering,
Kalinga Institute of Industrial Technology (KIIT)-DU.

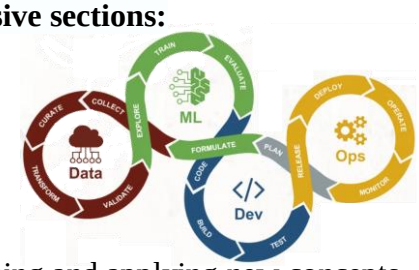
Proposal for Short Term Training
On
Machine Learning & DevOps (MLOps)

Date of commencement: 20th June 2024

Machine Learning Operations (MLOps) is often likened to DevOps for machine learning, amalgamating techniques and tools from data engineering, machine learning, software development, and operational practices. This training program aims to equip participants with the skills necessary to automate the lifecycle of machine learning algorithms, which is often desired in production environments, spanning from data curation, initial model training to deployment and retraining against new data.

Duration: 4 weeks(40hr) + Project
Course Fee: Rs. 5000/-(inclusive all taxes)
Eligibility: B. TECH. 2nd Year or 3rd year
Mode: Hybrid Mode (Theory will be in online mode and hands-on in offline mode in university campus)

The training will be structured into four comprehensive sections:
1. Data Curation and visualization
2. Understanding of Popular ML Algorithms
3. Software Development and Cloud integration
4. Projects



Pre-requisite:
Basic knowledge of Python and a strong interest in learning and applying new concepts.
Training Outcome:
Upon successful completion, participants will be able to
1. Translate business objectives into machine learning problems and develop ML operations to address them effectively.
2. Design and develop end-to-end software solutions, establishing contracts and APIs to deliver robust applications.
3. Gain a comprehensive understanding of MLOps principles, tools, and techniques necessary for deploying, managing, and scaling machine learning models in production environments.

Evaluation:
Online class participation will be evaluated through Zoom polling responses during lecture delivery. Hands-on activities in the ML Lab will be assessed through project submissions.

Certificates will be issued to students achieving a score of more than 60%
This training program offers a unique opportunity for participants to enhance their skills in machine learning, software development, cloud integration, and preparing them for the challenges of modern data-driven CI-CD environments.

Instructor:
Dr. Suprava Patnaik
Professor, School of Electronics Engineering, Kalinga Institute of Industrial Technology (KIIT)-DU.