FUNDAMENTALS OF DEEP LEARNING

DAY 1

EXPERT
SNEHA BHAPKAR
(NVIDIA DLI AMBASSADOR)

Get Nvidia Certified in a day by hand-on training of AI model on NVidia remote GPU

FUNDANMENTALS OF DEEP LEARNING COURSE WORTH $90.

LEARN FROM PROFESSIONALS FROM INDUSTRY

LEARN AIOT TECH AND BUILD PROJECT

DAY 2

AI BASIC, IOT BASICS INTRODUCTION

EXPERT 1
SNEHA BHAPKAR
AI ENGINEER

EXPERT 2
YOGESH HEGDE
IOT ENGINEER

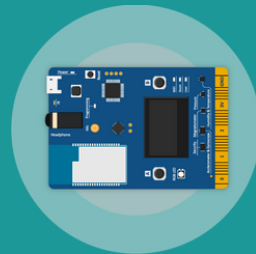📍 **DEPT. OF INSTRUMENTATION , CUSAT**

📅 **28,29TH FEBRUARY 2024**

🕐 **9:00 AM - 4:00 PM**

Cordinators

Ratheesh PM
Asst. Professor
Dept. Of Instrumentation

Anurath MS
Asst. Professor
Department of Instrumentation

NVIDIA | IoTIoT.in IoT & AI community

DEEP LEARNING AND
IOT WORKSHOP
Dept. of Instrumentation, CUSAT

2 DAY WORKSHOP WITH CERTIFICATION

- Fundamentals of Deep Learning **Nvidia** Course with certification
- Learn **AI IoT** technologies and build your own project on **BrainyPi** with certification

Day 1

Fundamentals of Deep learning

Get Nvidia Certified in a day by hands-on training of AI model on NVidia remote GPU

- **Introduction**

  Meet the instructor.
  Create an account at courses.nvidia.com/join

- **The Mechanics of Deep Learning**

  Explore the fundamental mechanics and tools involved in successfully training deep neural networks:
  1. Train your first computer vision model to learn the process of training.
  2. Introduce convolutional neural networks to improve accuracy of predictions in vision applications.
  3. Apply data augmentation to enhance a dataset and improve model generalization.

- **Pre-trained Models and Recurre**

  Leverage pre-trained models to solve deep learning challenges quickly. Train recurrent neural networks on sequential data:
  1. Integrate a pre-trained image classification model to create an automatic doggy door.
  2. Leverage transfer learning to create a personalized doggy door that only lets in your dog.
  3. Train a model to autocomplete text based on New York Times headlines.

- **Final Project: Object Classification**

  Apply computer vision to create a model that distinguishes between fresh and rotten fruit:
  1. Build a data generator to make the most out of small datasets.
  2. Improve training speed by combining transfer learning and feature extraction.
  3. Discuss advanced neural network architectures

- **Final Review**

  Review key learnings and answer questions.
  2. Complete the assessment and earn a certificate.
  3. Complete the workshop survey. Learn how to set up your own AI application development environment.

Day 2

Learn AI IoT tech   Build projects

- Build your own AI project end-to-end .
- Build your own IoT project and deploy on BrainyPi

- **AIoT Short Skilling and Introduction to BrainyPi**

  - What is IoT, introduction to interfaces , processing devices , cloud and analytics
  - What is AI , machine learning and deep learning difference , practical examples of use of AI
  - What is BrainyPi and how to deploy application on edge

- **Project selection and team formation**

  - Choose your idea or choose from the list of topics.
  - Form a team to work on a project

- **Build project with the team**
  - Build AI Project OR
  - Build IoT Project OR Build AIoT Project
  - Write blog on the project
  - Make video if successful

- **Deploy Project on BrainyPi and Test (Optional)**

  Deploy IoT or AIoT Project on BrainyPi

- **Presentations (top 5 teams)**