Artificial Intelligence

What do Self Driving Car, face recognition, web search, industrial robots, missile guidance, and tumour detection have in common? They are all complex real world problems being solved with applications of Intelligence. This course will provide a broad understanding of the basic techniques for building intelligent computer systems and an understanding of how AL is applied.

Introduction to Artificial Intelligence

- Why do we need to study AI?
- Applications of AI
- Classification of AI
- AI Concepts, Terminology, and Application Areas
- Difference AI and ML
- Woking and concept of AI

Introduction to Datasets

- Introduction to Datasets
- Get acquainted with Data

Environment (IDE) and Software

- Introduction to IDE
- Use of IDE
- Introduction to python IDE
- Introduction to Anaconda
- Introduction to Jupiter Notebook
- Introduction to Octave

Flow of Algorithms

- Fundamental concepts in genetic algorithms
- Use of IDE
- How IDE works?
- How data, code Conversion Takes place

Python

- Introduction to Python
- Different type of Python IDE
- Why Python
- Installation of Python
- Application of Python
- Different types of python Libraries
- Programming in python
    - keywords
    - functions
    - logical and conditional operators
    - list , tuples , set etc.
    - Problem statements
    - different types of error

Anaconda

- Introduction to anaconda
- Why anaconda
- Application of anaconda
- About Jupyter notebook
- Practicing python in Anaconda
- Performing data analysis
- Advantage to Anaconda

Opencv

- Introduction of Opencv
- Why Opencv
- Use and application
- Installation and use
- Workflow

Data Mining: Clustering Techniques

- Introduction to Data Mining
- Cluster Analysis (Hierarchical Clustering, K- Means Clustering)

Advance level Data Learning Techniques

- Types of Learning
- Supervised Learning
- Unsupervised Learning
- Advice for applying machine Learning
- Machine Learning System Design

Practical

- Introduction to algorithm
- Cluster Working
- Clustering models
- Machine learning Algorithms
- Prediction Models algorithms
- Designing Face recognition
    - Working of detector
    - About Opencv and its Working
    - Understanding the Algorithm
    - Implementing the Algorithm
    - Image conversion.
    - Testing (error , Accuracy) of Model

- K- Mean Algorithm Project
- Hierarchical algorithms project
- Data Analytics practical's
- 2D Game Designing
- Basic Animation
- Project with turtle library
- Graphics Designing
- Create your shape project
- Covid19 Analysis on world map