Training Report – Day 1

Topic Covered Today:

- What is Machine Learning?
- AI vs ML vs Deep Learning
- Applications of Machine Learning
- Importance of Data in ML

Key learning:

- Today I learned that **Machine Learning is a method that allows computers to learn from data and improve their performance without being explicitly programmed**. It is a part of Artificial Intelligence and is used in many real-life applications such as recommendation systems, voice assistants, and spam filters. I also understood that the machine uses past data to make decisions or predictions, which makes it more efficient and intelligent over time.
- I learned the difference between **Artificial Intelligence (AI)**, **Machine Learning (ML)**and**DeepLearning(DL)**.

  AI is the broad concept of machines simulating human intelligence, ML is a subset of AI that enables machines to learn from data, and DL is a more advanced form of ML that uses neural networks to mimic the human brain
- I learned that **Machine Learning is used in many real-life applications** such as spam email filtering, product recommendations on shopping websites, voice assistants like Siri and Alexa, face recognition on mobile phones, and fraud detection in banking systems
- I learned that **data is the most important part of Machine Learning**. A machine learns patterns, makes predictions, and improves its accuracy based

on the quality and quantity of data provided. Without proper data, the ML model cannot learn or perform well.

Activites / Assignments :

- Trainer introduced Python as the main programming language for ML.
- Learned about tools like Jupyter Notebook and Google Colab.
- Noted down important ML libraries such as pandas, NumPy, and scikit-learn.
- Observed a live demo of running ML code in Jupyter Notebook.
- Given homework to install Anaconda or explore Google Colab.

Personal Reflection for Day 1:

Today's session gave me a good understanding of what Machine Learning is and how it is used in real life. I found it very interesting to see how machines can learn from data and make predictions. The difference between AI, ML, and Deep Learning was explained clearly. I'm excited to start working with tools like Python and Jupyter Notebook in upcoming sessions.