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Training Day-1 Report:

Introduction to Machine Learning :-

- **What Is Machine Learning?**
  Machine learning (ML) is a discipline of artificial intelligence (AI) that provides machines with the ability to automatically learn from data and past experiences while identifying patterns to make predictions with minimal human intervention.

- Machine learning methods enable computers to operate autonomously without explicit programming. ML applications are fed with new data, and they can independently learn, grow, develop, and adapt.

- Machine learning derives insightful information from large volumes of data by leveraging algorithms to identify patterns and learn in an iterative process. ML algorithms use computation methods to learn directly from data instead of relying on any predetermined equation that may serve as a model.

Today, with the rise of big data, IoT, and ubiquitous computing, machine learning has become essential for solving problems across numerous areas, such as:

- Computational finance (credit scoring, algorithmic trading)
- Computer vision (facial recognition, motion tracking, object detection)
- Computational biology (DNA sequencing, brain tumor detection, drug discovery)
- Automotive, aerospace, and manufacturing (predictive maintenance)
- Natural language processing (voice recognition)

How does machine learning work?

Machine learning algorithms are molded on a training dataset to create a model. As new input data is introduced to the trained ML algorithm, it usesthe developed model to make a prediction.