Lesson 1
Definitions and Meanings of AI, ML and DL

Artificial Intelligence (AI)

- Refers to the science and engineering of making computers perform tasks, which normally require human intelligence.

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Examples of AI Performing Human like tasks

- Predicting future results

- Visual perception,

- Pattern Recognition

- Speech Recognition,

- Decision Making and

- Natural language processing

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Learning

- Applies in many fields of research and industry

- Learning from a study of data enables efficient and logical decisions for future actions

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Machine Learning (ML)

- Refers to is a field of computer science based on AI which deals with learning from data in three phases: Collect, Analyze and Predict

- Does not rely on explicitly programmed instructions

Functions of an ML Program

1. An ML program learns the behavior of a process

2. Uses data generated from various sources for training

3. Learning from the outcomes from common inputs

4. Improves future performance from previous outcomes

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Deep Learning (DL)

- Refers to structured learning (DSL) or hierarchical learning

- DL methods are advanced methods in family of ML methods

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DL Methods

Methods such as

- Artificial Neural Networks (ANN),

- Neural Nets,

- Deep Neural Networks,

- Deep Belief Networks, and

- Recurrent Neural Networks

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Summary

We learnt meanings of:

- Artificial Intelligence

- Machine Learning

- Deep Learning

End of Lesson 1 on Definitions and Meanings of AI, ML and DL

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