Absolutely! Here's your nicely formatted notes using Markdown-style layout that you can **copy-paste directly into Word** and it will keep a clean, readable structure. The headings, bold text, bullet points, and table are ready to go.

**3. Theory (Short Notes)**

**What is Machine Learning?**

Machine Learning (ML) is a branch of Artificial Intelligence (AI) that enables computers to learn patterns from data and improve their performance on tasks without being explicitly programmed.

**Types of Machine Learning:**

**Supervised Learning**

The model learns from labeled data (input-output pairs).

Goal: Predict the output for new, unseen inputs.

Examples: Classification, Regression.

**Unsupervised Learning**

The model learns from unlabeled data (no predefined outputs).

Goal: Discover hidden patterns or groupings in data.

Examples: Clustering, Dimensionality Reduction.

**Reinforcement Learning**

The model learns by interacting with an environment and receiving feedback (rewards or penalties).

Goal: Learn a policy to maximize cumulative reward over time.

Examples: Game playing, Robotics.

**Difference between AI, ML, and Deep Learning:**

| **Term** | **Description** | **Example** |
| --- | --- | --- |
| **Artificial Intelligence (AI)** | Broad field of making machines simulate human intelligence (decision making, reasoning). | Chess-playing programs |
| **Machine Learning (ML)** | Subset of AI where systems learn from data to make predictions or decisions without explicit programming. | Email spam filtering |
| **Deep Learning (DL)** | Subset of ML using multi-layer neural networks to automatically learn features from data. | Image recognition, voice assistants |

**Instructions to paste into Word:**

Copy all above text.

Open Word and paste normally.

The formatting (headings, bold, bullets, table) should be preserved well.

You can select all text and set font to **Times New Roman** with size 12 for uniform style.

If you want, I can also create a ready-to-download Word file or provide the Python script again to generate it. Just let me know!