**Task 4**

**ML Problem Types**

**Marks: 20**

**Time: 15 minutes**

This task is based on your real-world understanding and ability to identify what kind of problem it is. Identify the type of ML problem. Mention whether a problem is Classification / Regression / Clustering / Association / Reinforcement type.

**List the type of problem for the problems you specified in Task3 for the following domains:**

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| **S. No** | **Healthcare** | **Type** |
| 1 | Medicine strips and bottles inventory management (OCR) | Classification |
| 2 | Diagnosis Chatbot | Classification/ Regression |
| 3 | Analyzing Scanned Data (Heart rate, Sleep cycle etc.) | Regression |
| 4 | Clinical Trial Simulation | Reinforcement |
| 5 | Robot Assisted Surgery | Reinforcement |

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| **S. No** | **Education** | **Type** |
| 1 | Analyzing Student Performance | Clustering |
| 2 | Prediction for related topics to learn | Association |
| 3 | Subjective answers grading | Classification/ Regression |
| 4 | Digital assistance for doubts (NLP) | Classification/ Regression |
| 5 | Career Guidance Analysis | Classification |

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| **S. No** | **Banking** | **Type** |
| 1 | Risk Analysis | Classification |
| 2 | Targeted Marketing | Association |
| 3 | Automated Customer Support | Classification/ Regression |
| 4 | Anti-Fraud System | Classification |
| 5 | Predicting Market Trends | Regression |

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| **S. No** | **E-Commerce** | **Type** |
| 1 | Product Association and Prediction (Recommendation) | Association |
| 2 | Product Review Analysis | Classification |
| 3 | Optimizing search results (NLP) | Classification/ Regression |
| 4 | Price Forecasting | Regression |
| 5 | Customer Demographic Analysis | Clustering |

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| **S. No** | **Your Problems** | **Type** |
| 1 | College/University Acceptance Analysis | Classification |
| 2 | Expense/Spend Analysis | Regression |
| 3 | Email Malware Filtering | Classification |
| 4 | Traffic Analysis | Classification |
| 5 | Weather Prediction | Regression |