**Task 3**

**ML Problem Identification**

**Marks: 20**

**Time: 15 minutes**

This task is based on your real-world understanding and ability to identify whether a problem can be solved by Machine Learning or not. Identify and fill problems that you feel can be solved with Machine Learning and also mention the difficulty level of solving using Machine Learning, if it can be solved.

**List a set of problems that you think AI/ML can solve in these following domains**

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| **S.No** | **Healthcare** | **Difficulty** |
| **1** | **Disease diagnosis based on the symptoms** | **Easy** |
| **2** | **Personalized treatment based on their previous history** | **Medium** |
| **3** | **Patient betterment analysis based on their behavior for the brain related syndromes like Autism in children** | **Hard** |
| **4** | **Health insurance claim automation based on the records from hospitals and fastening it by reducing human intervention** | **Medium** |
| **5** | **Medical search and summarization for doctors from the cutting edge articles around the world using Generative AI - MedGPT using pubmed articles** | **Hard** |

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| **S.No** | **Education** | **Difficulty** |
| **1** | **Personalized curriculum plan based on their history** | **Medium** |
| **2** | **Personalized career suggestion based on their interest, academic history, and current trend.** | **Medium** |
| **3** | **Automatic engaging content generation for the students from the academic content** | **Hard** |
| **4** | **Translation of educational contents from multiple languages to native language which will increase the inclusiveness in the society** | **Easy** |
| **5** | **New way of automated grading method based on different factors instead of static one-size fits all grading method** | **Medium** |

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| **S.No** | **Banking** | **Difficulty** |
| **1** | **Credit card card detection** | **Easy** |
| **2** | **Customer assistance using LLMs** | **Hard** |
| **3** | **Automated workflows with minimal human interventions like account opening, account verification, etc** | **Easy** |
| **4** | **Small scale, short-term sanctions based on their bank transaction history for the merchants.** | **Hard** |
| **5** | **Trading bots based on News and current trend factors same like retail human trader instead of trading based on financial sheet alone.** | **Hard** |

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| **S.No** | **E-Commerce** | **Difficulty** |
| **1** | **Semantic search of items (Both word semantics + visual features of items) instead of key word based search.   <https://medium.com/@vignesh865/next-gen-search-unleashed-the-fusion-of-text-and-semantics-redefining-how-we-search-c67161aaa517>** | **Easy after openAi’s CLIP model** |
| **2** | **Influencer marketing is the current trend in E-commerce. Ranking influencer based on multiple factors like locality, value they bring on the table, suitability of the particular product, audience reach.** | **Hard** |
| **3** | **Accurate inventory projection by analyzing from production to last-mile delivery** | **Medium** |
| **4** | **Efficient Route planning for supply chain and last mile delivery** | **Hard** |
| **5** | **Recommendation systems** | **Easy** |

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| **S.No** | **Your Problems** | **Difficulty** |
| **1** | **Knowledge base 2.0 based on LLMs for SAAS companies** | **Hard** |
| **2** | **Multi-variate stock market analysis using LLMs which should consider news, financials, past retailers actions, and charts.** | **Hard** |
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