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

S.No	Healthcare	Type
1	**Problem: What if a person is ailing and can't see a doctor immediately? Or your blood sugar level is decreasing, or blood pressure shoots up? In that case, we can't order medicines immediately.** **Solution: My solution proposes the combination of AI + E-commerce application.** **Many people use smartwatches these days. We can use those smart devices to collect all the data, which will help us to know what is happening in person's body. So, those medicines can be ordered according to the situation from E-commerce platform.**	**Association (to identify disease from the symptoms)**

	And we can even put doctors on this platform as well. Where doctor will also receive notification if anyone falls sick severely. Or, if someone meets an accident, it will immediately prompt a message to the hospital.	
2	**Problem: If you have ever visited a hospital, you'll get to know that the amount of money spent on curing a patient usually exceeds the amount that you'd have expected.** **Solution: Here, we can create an AI that will help doctors to give preferable treatment to a patient according to the health of that patient. It will also use past records of patients with the similar symptoms.** **Even sometime unnecessary treatment is given to the patient who doesn't even need it.** **If this kind of AI/ML system is developed, then it will be easier for a patient to manage his/her revenue cycle.**	**Association + Clustering**

S.No	Education	Type
1	**Problem: It is fairly impossible for a teacher to pay attention to every student and develop a customized learning path for each student in the classroom.** **Solution: It'd be great if we build an AI based learning and feedback platform that track student's learning pattern.** **An AI/ML model that identifies the areas where a student is not particularly good at, and then that model will provide more content on them.** **So the learning path of each and every student can be customized.** **This kind of learning platform will help teachers to focus on specific areas where a particular student is not good at.**	

S.No	Banking	Type
1	**Problem: Technology has taken banking sector to a new height. People are using Credit/Debit cards, mobile, internet banking without any hesitation. But, there are still some loopholes. What if you lose your card? What if you want to pay using mobile app, and you're not logged in. We have to log in to our mobile application in**	**Clustering (We can use image segmentation using K-means Clustering)**

public place. A person standing behind can easily see all your login credentials. **What if we have a system where we're not required to use any of these?** **Solution: Biometric Payment. Or we can even call it contactless payments. A payment gateway system where people can pay with their faces.** **This system would have also helped during pandemic.** **Your face can become your Debit/Credit card.** **We can enhance this application by adding one more feature in future.** **We can even transfer the money to someone's account by clicking their picture in real-time from a mobile phone. This feature can also be included in interact.**	

S.No	E-Commerce	Type
1	**Problem: Reviews are the most important factor for any e-commerce seller. But some of those reviews are fake, and those fake reviews have become a headache for e-commerce platforms.**	**Classification (Whether the review is fake or not)**

	Solution: AI can be used to tackle fake customer reviews, both negative and positive.	

S.No	Your Problems	Type
1	**Problem:** Every student faces the problem of finding the classroom on-campus initially. They tend to get lost on campus, as the university campuses are usually huge and very confusing. I also faced this issue on Casa Loma campus when class shifted from C301 to E321. **Solution:** We can make an indoor navigation system. It can also be used in corporates to find your desk.	**A* Path finding Algorithm**