**DAT-410 Machine Learning**

***Homework:* 01**

***Assigned:* 01/30/2024**

***Due:* 02/06/2024**

***Points:* 50**

***Submission:*** Please submit a **.pdf** document (<your\_name>\_hw01**.pdf**)

1. Give 2 examples of the learning process not seen in class. Indicate the Task, Performance, and the Training Experience for both the examples. (8 Points)

2. With the help of a block diagram explain in detail the components of a learning process. (10 Points)

3. With an example, explain the difference between a traditional programming technique and Machine Learning. (6 Points)

4. Explain the 4 forms of data. Give at least 3 examples for each form. (6 Points)

5. Briefly explain Reinforcement learning with an example. (5 points)

6. Explain Batch (offline) v/s Online learning. (5 Points)

7. Explain Instance-based v/s Model Based learning. (5 Points)

8. List any 5 challenges of Machine Learning. (5 Points)