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ITMD 413  
HW 14

1.
  - a. Machine learning is the process by which computers are taught to think and perform like humans do. They continuously improve themselves over time with the use of data and information that is either given to them. It can be used in predictive analysis to gain a better understanding of things such as natural phenomena, economics, and other sciences.
  - b. **Supervised Learning:** The program uses data from a set of rows and columns to create predictions for new data. Data is already classified before being processed by the program.  
**Unsupervised Learning:** The program uses unclassified data to discover patterns and information for itself.  
**Reinforcement Learning:** This form of learning involves giving negative or positive feedback to the machine depending on whether or not the machine correctly performs a task (positive if they do it right and negative if they do it wrong), and the machine tries to maximize the reward.

### **Learning Report Summary**

1. Yes I completed the assignment. It ran without errors and I got the correct results (graphs). The program was tested sufficiently (graphed twice)
2. I spent about 4 hours on this assignment.
3. I found the assignment to be relatively easy. Most of it was things I already knew how to do.
4. Yes, I wrote the program myself. I did not have help from anyone else.
5. I used the documentation and the book when I had any issues. I looked up the syntaxes for some graphs, as well as how to import the data.
6. I learned how to use linear regression, as well as how to manipulate data to predict future data.
7. None.