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CSCI-B 455

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Home Assignment 1

1. Bayes’ Rule
   1. Find: , probability the person you recognize went to school with you
   2. Given:
2. Recession
   1. Find: , probability of recession given prediction
   2. Given:
3. Loss matrix
   * 1. Number of patients predicted to be but are really
   1. should be the outcome of the prediction.
   2. The Healthy prediction has the most risk because there will be patients who have Cirrhosis or Liver Cancer that go untreated, which could lead to more deaths. On the other hand, the Liver Cancer prediction has the least risk because the population with the highest probability of death, liver cancer patients, will be treated fully and no population will be left untreated.
4. Naïve Bayes Model
   1. The model will take in features of the car and output the probability of the car being stolen.
   2. General equation for probability of stolen given attributes
   3. Given the features , the probability is as follows:
   4. The car has a chance of being stolen given it has these attributes.
   5. The car has a 7.2% chance of not being stolen given it has these attributes.
5. See attached notebook.