Course: CS131 Artificial Intelligence

Assignment: Naive Bayesian Classification

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Design Part:

1. We load the data and convert the string data to a float type, making the NaN value equal to 0 for further data processing and program operation.

2. Using recursive Bayesian estimation, the probability of an object being an airplane or a bird is derived based on its speed.

3. We classified objects based on their probabilities.

4. Add extra feature based on the absolute value of difference between the one data and its previous data.

From the dataset we are given, we could observe that birds have a non-smooth trajectory and can make abrupt changes in velocity, whereas planes cannot; consequently, if the absolute value of the difference between two consecutive velocities is large enough, this item is most likely a bird.

Test Part:

To run the program, make sure it's in the same folder with pdf.txt, and data.txt.



When running the program, you could change the **default** value: **True** for adding extra features, **False** for not adding extra features.