Machine Learning hands on using Python

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SME : Parag Jain
Week 4

Overview

- Implementing k-nearest neighbor

Image Dataset Used

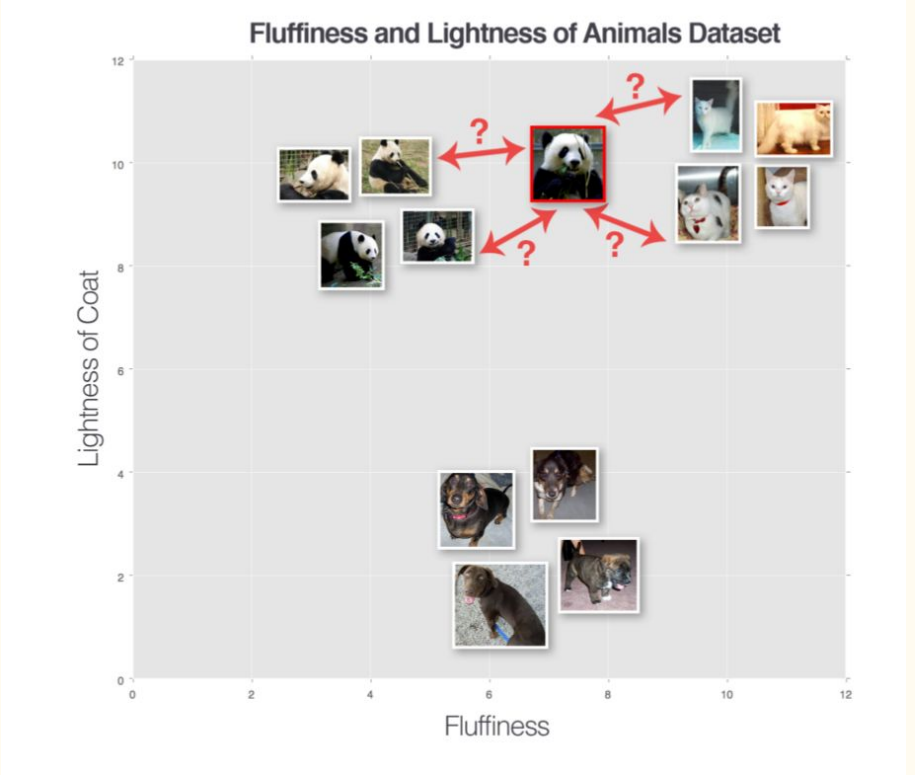
- Dataset containing images of Cats, Dogs and Pandas

Test Image

- Image to be classified given the dataset

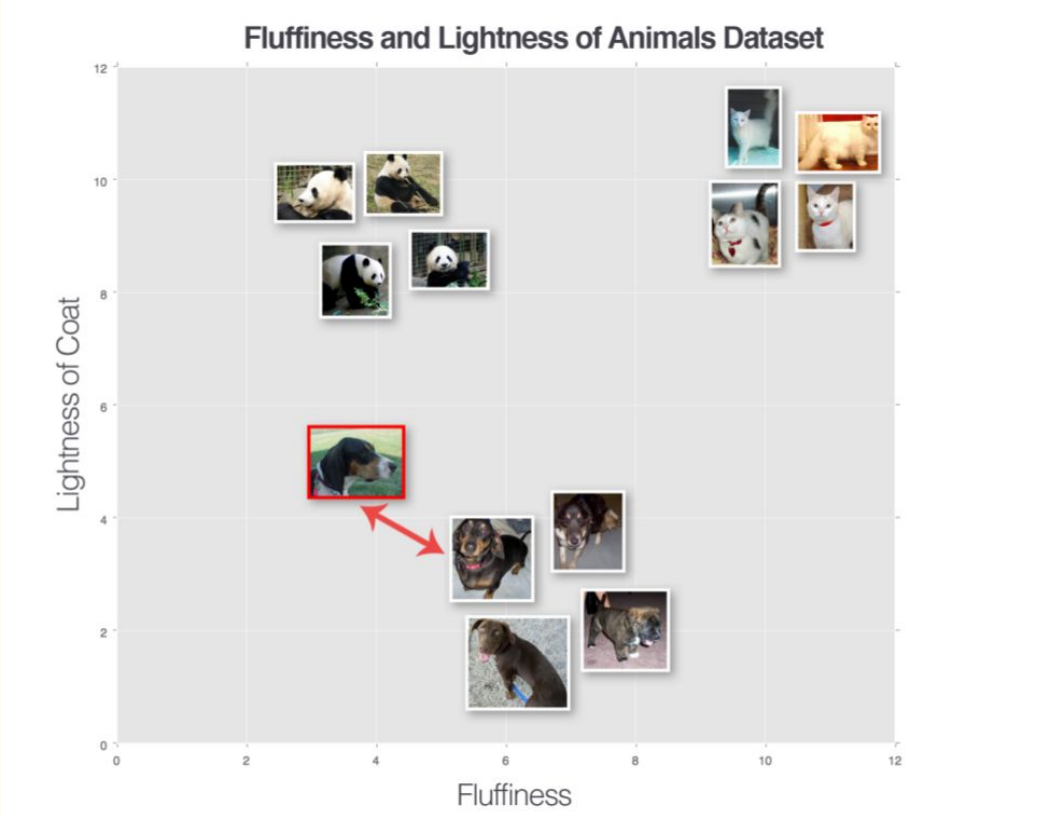
Using distance metric to compare

- Use distance metric such as Manhattan Distance or Euclidean Distance etc. to compare test image with other images in the dataset.



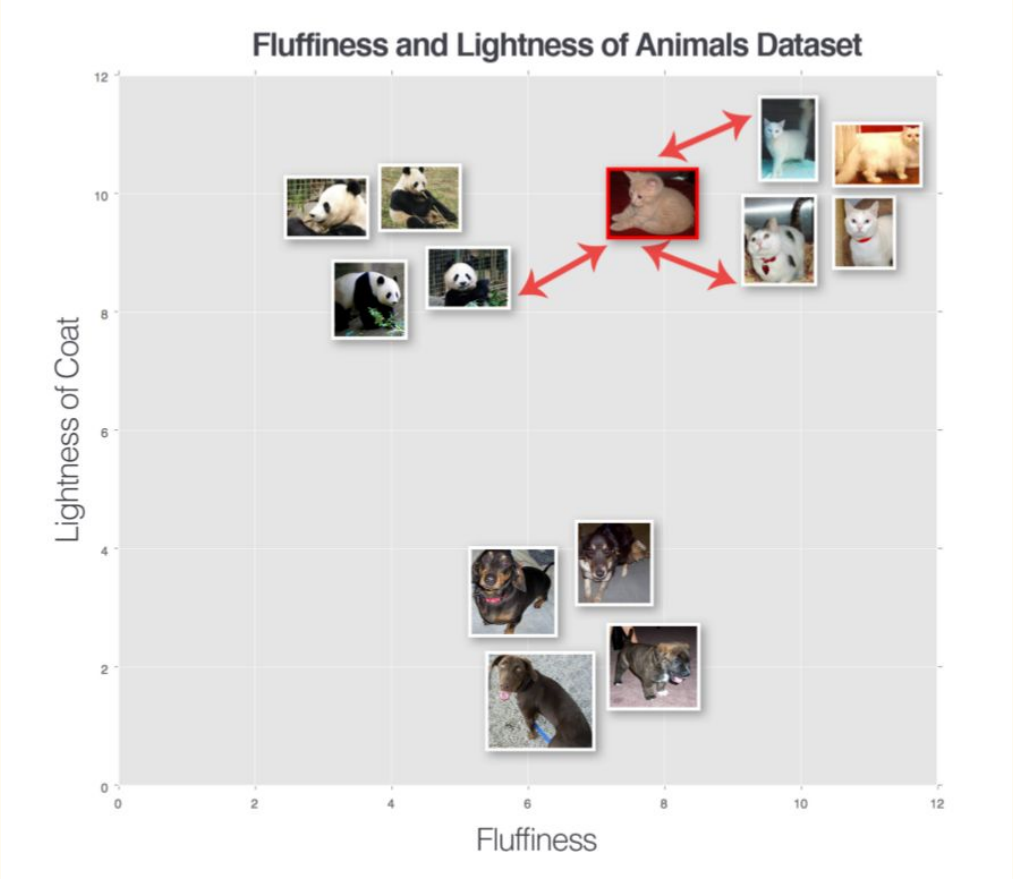
Result with k = 1

- Observe the result with k = 1 (test image is of Dog. You can continue with that of Panda itself.)



Result with k = 3

- Observe the result with k = 3 (test image is of Cat. You can continue with that of Panda itself.)



Assignment

- Run the code with :
  - Even values of k
  - Odd values of k

  Discern what happens in the above 2 cases.

- Find out the drawbacks of k-Nearest Neighbors.

- Read through the content provided to learn about Recall and Precision.

Feel free to explore the internet for the given tasks.
Any doubts?
Drop a mail on paragjainpes@gmail.com

Or

Put up your question on StackOverflow and then drop a mail with the link.