BerkeleyX: CS110x Big Data Analysis with Apache Spark

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Bookmark

Business Questions, Statistics, and Exploratory Data Analysis

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Here is a good description of the difference between descriptive and inferential statistics.

SUPERVISED LEARNING

- kNN (k Nearest Neighbors)
- Naive Bayes
- Logistic Regression
- Support Vector Machines
- Random Forests

UNSUPERVISED LEARNING

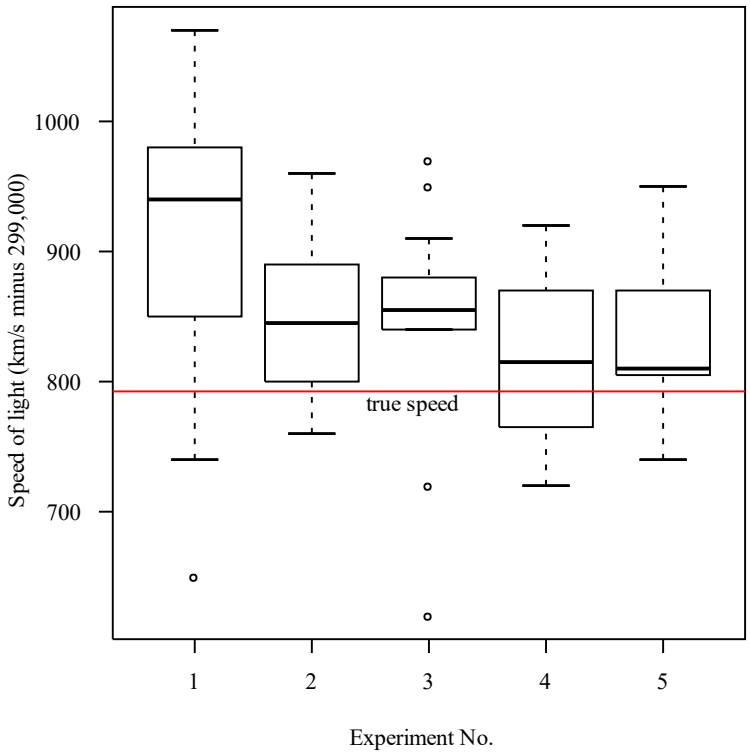
- Clustering
- Factor Analysis
- Latent Dirichlet Allocation

The US National Institute of Standards and Technology has an excellent primer on Exploratory Data Analysis.

The five-number summary is a descriptive statistic that provides information about a set of observations. It consists of the five most important sample percentiles:

1. The sample minimum (smallest observation)
2. The lower quartile or *first quartile*
3. The median (middle value)
4. The upper quartile or *third quartile*
5. The sample maximum (largest observation)

You can compare the five-number summaries of multiple observations using a box plot:



S Programming Language

(1/1 point)

Where was the S programming language invented?

- Google

- University of Auckland, New Zealand
- UC Berkeley
- Bell Labs ✔
- Dartmouth College

EXPLANATION

The S programming language was developed at Bell Labs for Exploratory Data Analysis.

Spark 1.4 introduced SparkR (R on Spark). SparkR provides a distributed data frame implementation that supports operations like selection, filtering, aggregation etc. (similar to R data frames) but on large datasets.

Exploratory Data Analysis

(1/1 point)
Which of the following is NOT a typical Exploratory Data Analysis activity?

- Visualizing data distributions
- Calculating summary statistics
- Examining data distributions
- Fitting a Support Vector Machine ✔

EXPLANATION

The activities of EDA include visualizing the data distributions, calculating summary statistics for the data, and examining the distributions of the data.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