

Tutorial 3

Overview

Non-Parametrics Models

- Definitions

- KNN

Ensemble Methods

- Definitions, Examples

- Random Forests

Clustering

- Definitions, Examples

- k-Means Clustering

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- ▶ Parametric or Non-parametric? What are the parameters?
 - Decision Trees
 - Naive Bayes
 - KNN
 - Random Forests
 - K-Means Clustering

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- ▶ What is the runtime of a naive implementation? How could you speed this up?

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- ▶ And more!

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- ▶ How does the amount of randomness in the trees affect the fundamental tradeoff of machine learning?

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- ▶ e.g. Types of genes, variants of a disease, topics on Wikipedia, friends on Facebook, etc.

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- ▶ Label switching problem