

# Suggested Review for Quiz: Learning

Entropy

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## Entropy

- Calculate entropy of a list of examples

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- Calculate entropy of a list of examples
- No conditional entropy or information gain

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## Decision Trees

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## Decision Trees

- Build a decision tree from a list of examples

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## Decision Trees

- Build a decision tree from a list of examples
- Classify a new example using a decision tree

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## Decision Trees

- Build a decision tree from a list of examples
- Classify a new example using a decision tree
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## Ensemble Classifiers



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## Ensemble Classifiers

- Explain bagging and random forests

# Suggested Review for Quiz: Learning

## Unsupervised Learning

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- Understand k-Means clustering

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## Naive Bayes

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## $k$ -Nearest Neighbor

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## Naive Bayes

- Given a list of examples
- Classify a new example

## $k$ -Nearest Neighbor

- Given a list of examples, a distance metric, and  $k$



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## Naive Bayes

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- Classify a new example

## $k$ -Nearest Neighbor

- Given a list of examples, a distance metric, and  $k$
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## Support Vector Machines

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- Given a 2D diagram

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- Given a 2D diagram
- Draw maximum margin separating hyperplane

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- Given a 2D diagram
- Draw maximum margin separating hyperplane
- Identify support vectors

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## Neural Networks

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## Neural Networks

- Given a neural network and inputs

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## Neural Networks

- Given a neural network and inputs
- Feed activation forward to produce outputs



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## Document Classification

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## Document Classification

- Explain intuition behind TF-IDF