ONLINE MASTERS IN **DATA SCIENCE**

DSC 257R - UNSUPERVISED LEARNING

INTRODUCTION

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Where Machine Learning Shines

Supervised learning with:

- highly specific tasks
- large labeled data sets

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Our focus so far -

Supervised learning with:

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Problems with this setting:

1. Large labeled data sets are usually hard to come by.
2. What about loosely related tasks?

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Humans seem to learn well in primarily unsupervised mode.

What Can Be Done Without Labels?

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1 Remember

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2 Summarize

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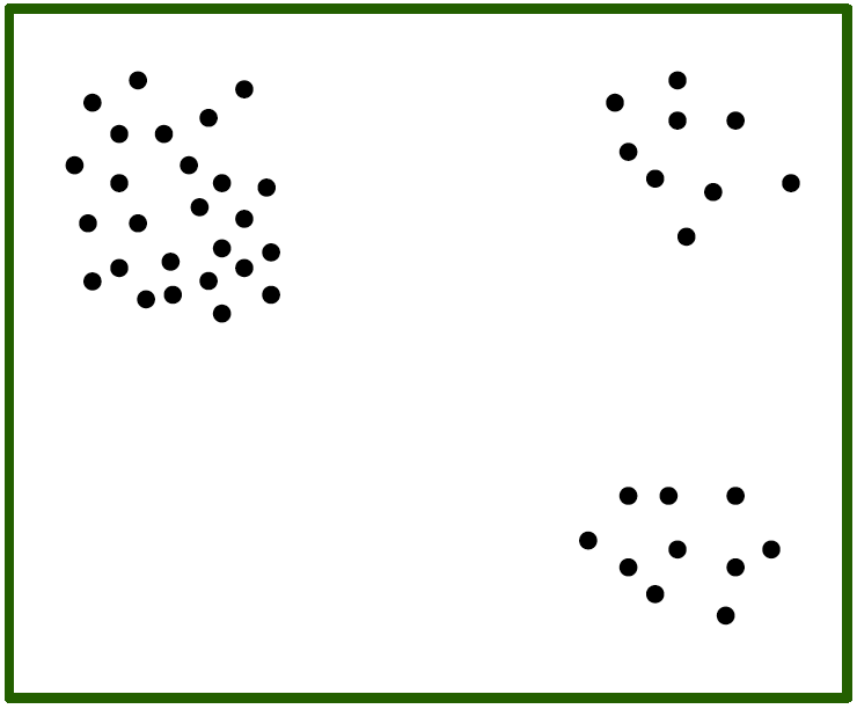
2 Summarize



What Can Be Done Without Labels?

3 Compress

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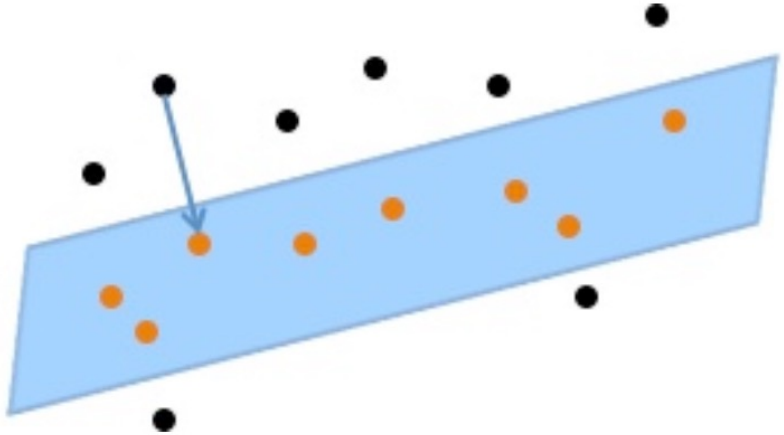
3 Compress

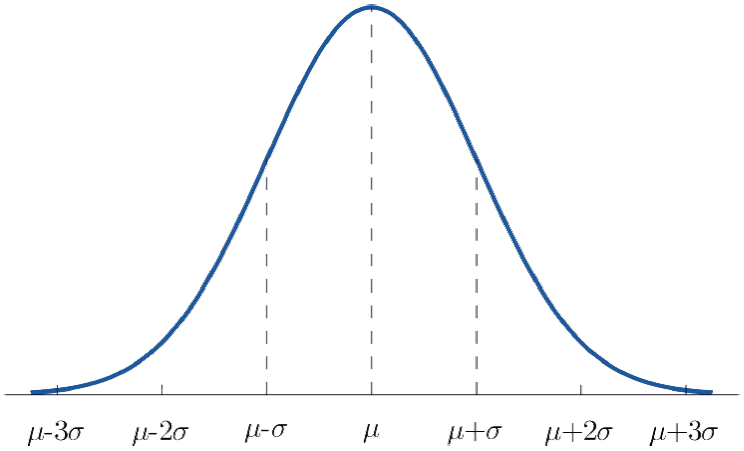


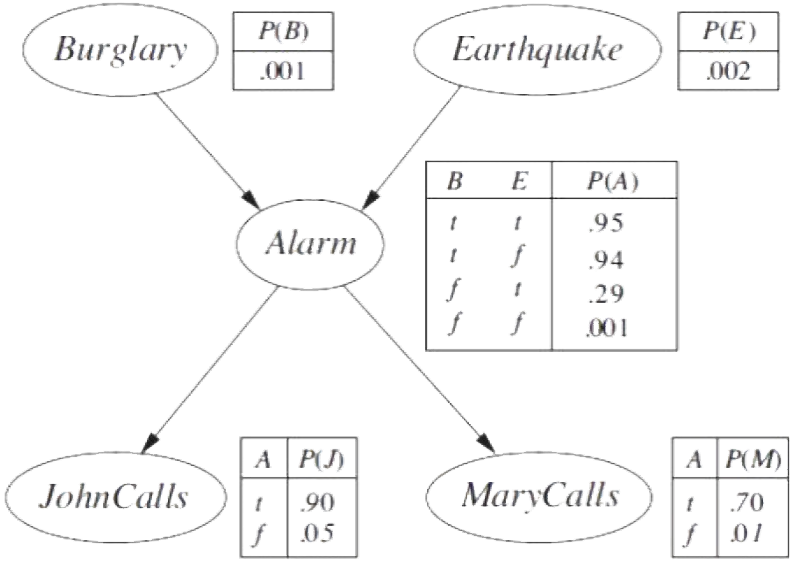
What Can Be Done Without Labels?

4 Generate

What Can Be Done Without Labels?

4 Generate



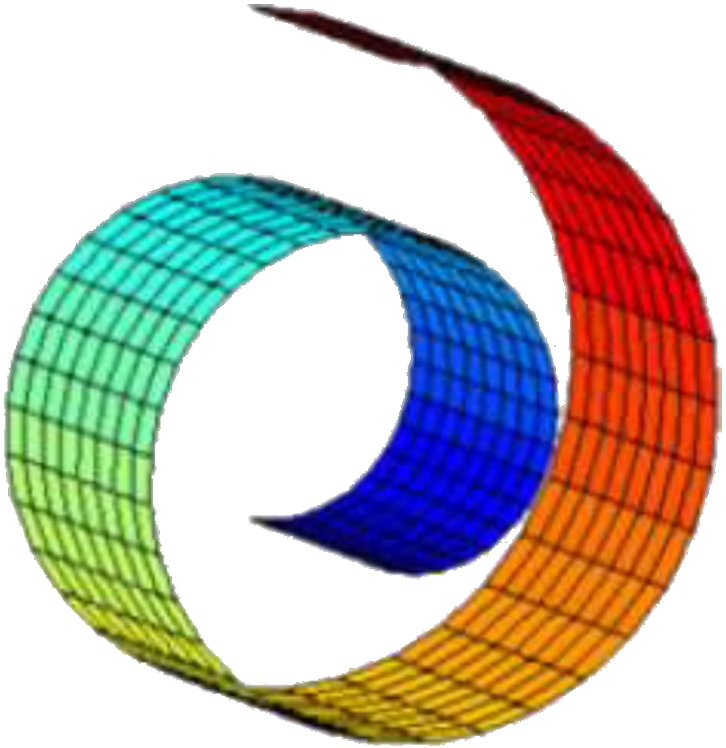


What Can Be Done Without Labels?

5 Embed

What Can Be Done Without Labels?

5 Embed



Some Approaches to Unsupervised Learning

1. Remember
2. Summarize
3. Compress
4. Generate
5. Embed