



[Unit 4 Unsupervised Learning \(2  
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2. Generative vs Discriminative  
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## 2. Generative vs Discriminative models

### Generative vs Discriminative models

OK?

But again, before we can go to the question of prediction,

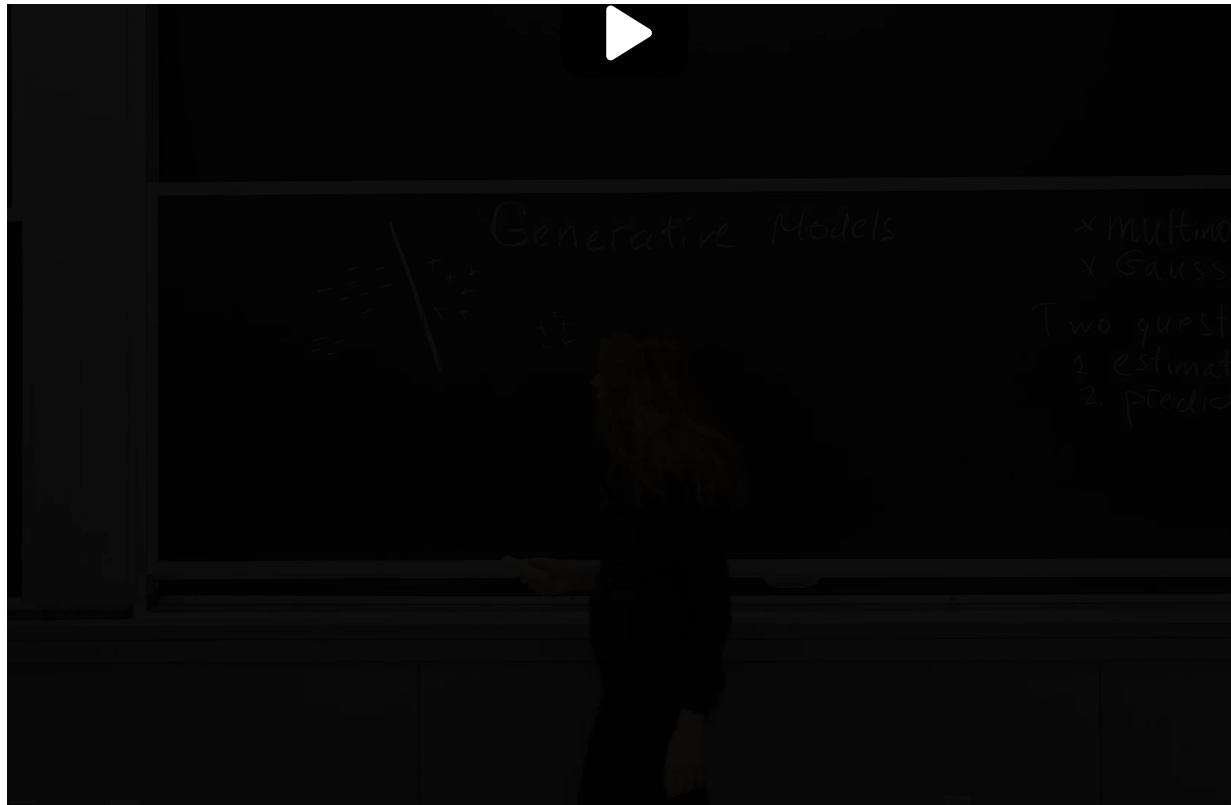
we need to start by thinking, how can I find the right type of a distribution to describe each class?

And the first thing that I will do,

I will start the road here with one class of models

which are called multinomials.

**OK?**



[End of transcript. Skip to the start.](#)



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## Generative vs Discriminative models

1/1 point (graded)

Which of the following option(s) is/are true about generative and discriminative models? Choose all that apply from the statements below:

☒ Generative models model the probability distribution of each class ✓

☐ Discriminative models model the probability distribution of each class

☐ Generative models learn the decision boundary between the classes

☒ Discriminative models learn the decision boundary between the classes ✓



### Solution:

Generative models work by explicitly modelling the probability distribution of each of the individual classes in the training data. For instance, gaussian generative models fit a gaussian probability distribution to the training data in order to estimate the probability of a new data point belonging to different classes during prediction.

Discriminative models learn explicit decision boundary between classes. For instance, SVM classifier which is a discriminative model learns its decision boundary by minimizing the distance between training data points and a learned decision boundary.

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You have used 1 of 2 attempts

 Answers are displayed within the problem

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