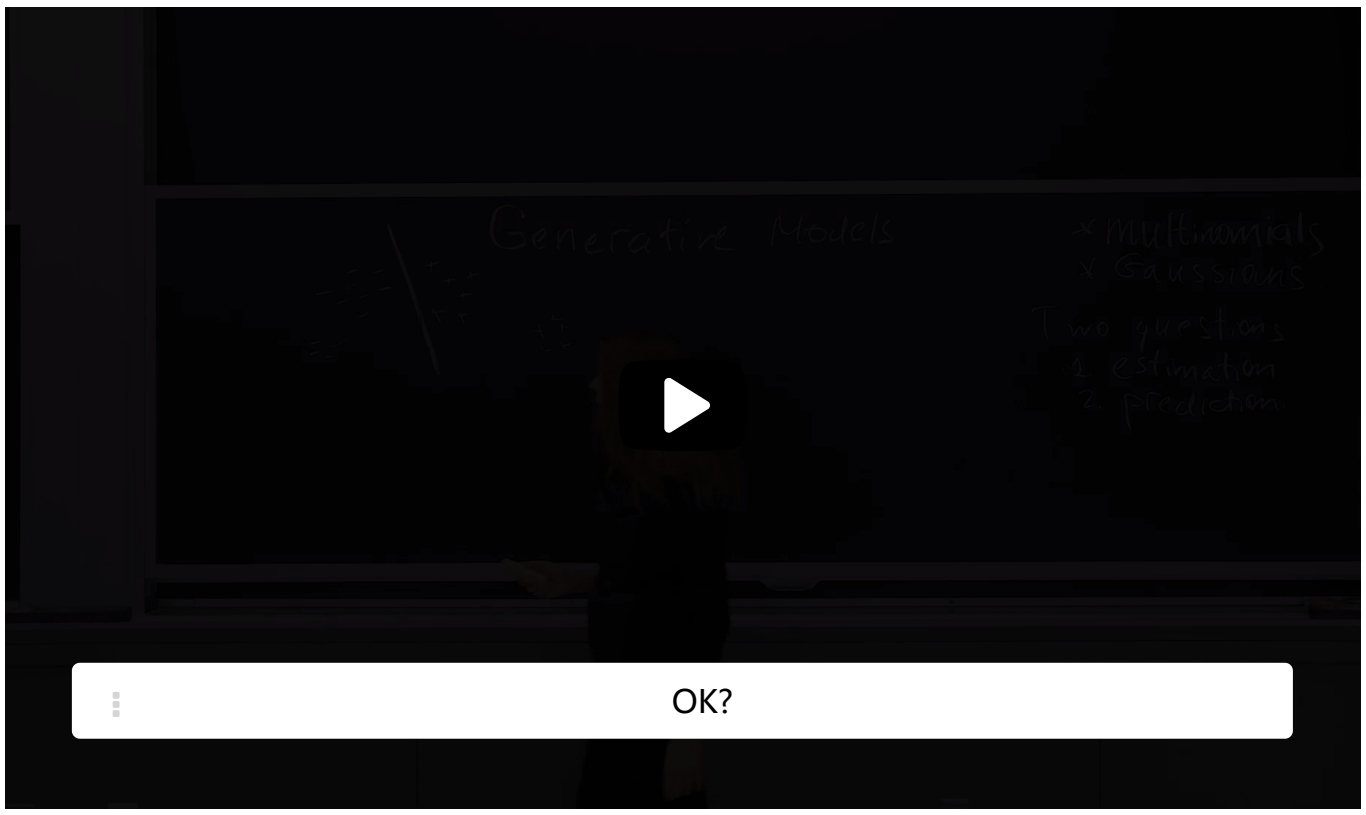
2. Generative vs Discriminative models

Generative vs Discriminative models



4:43 / 4:43 1.0x

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:

- [x] 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
- [x] 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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