



Multiclass classification
Multi-class problem

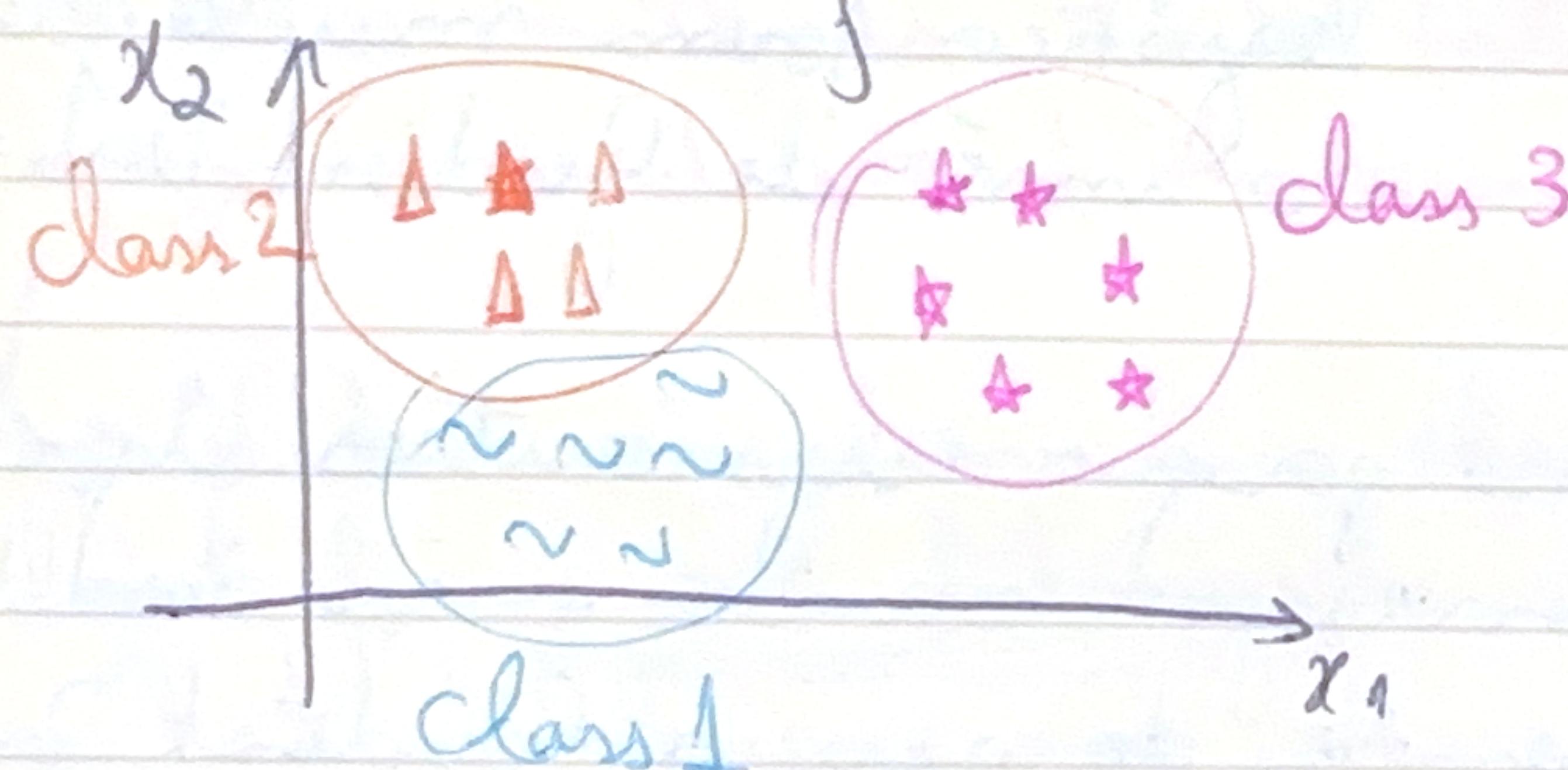
algorithm: "One-vs-all"

(also called "One-vs-rest")

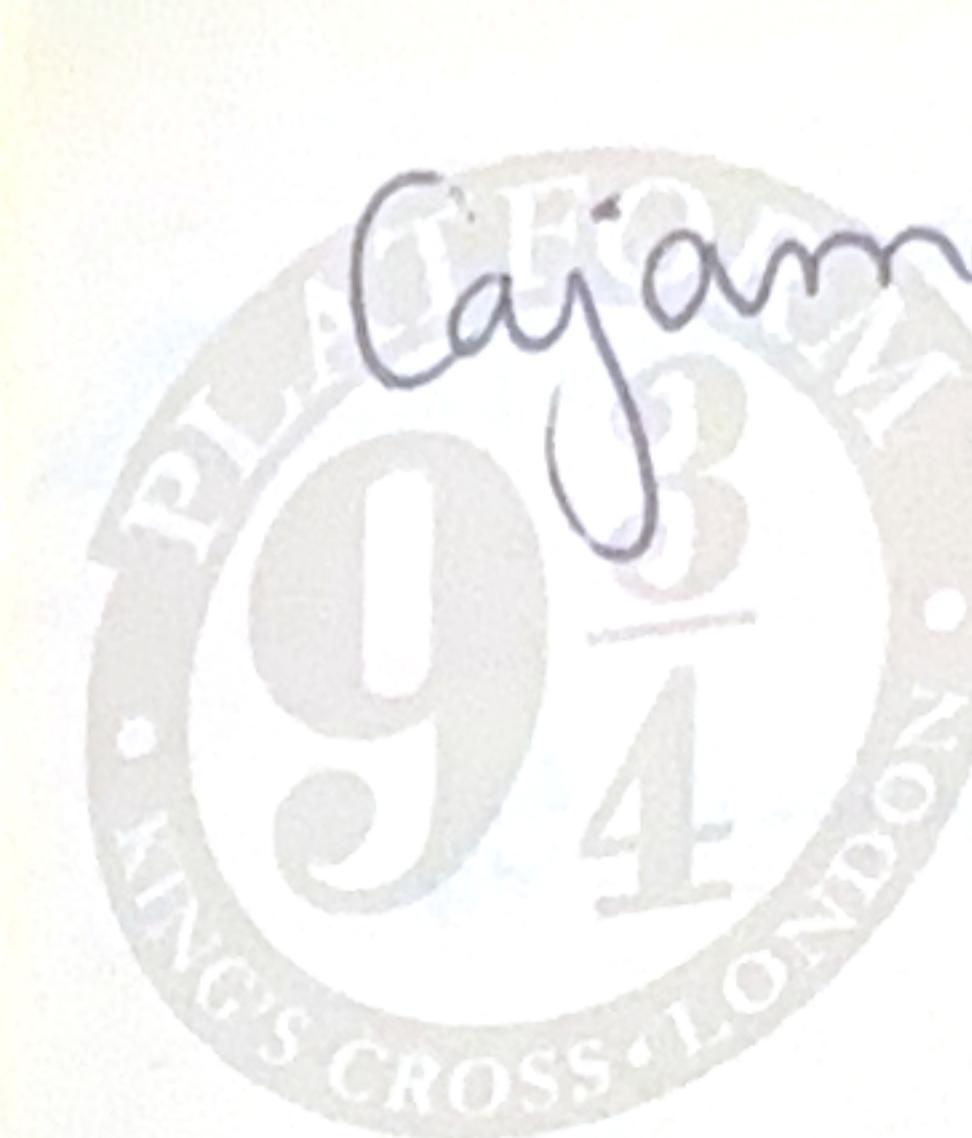
Para K classes, fazem-se K diferentes
tipos de parâmetros usando a regressão
logística, onde: $\hat{y}_j = \sigma(\theta_j^T x)$

$$h_{\theta}^{(j)}(x) = P(y=j | x; \theta) \quad j=0, 1, 2, \dots, K$$

$$\text{predição} = \max_j (h_{\theta}^{(j)}(x))$$

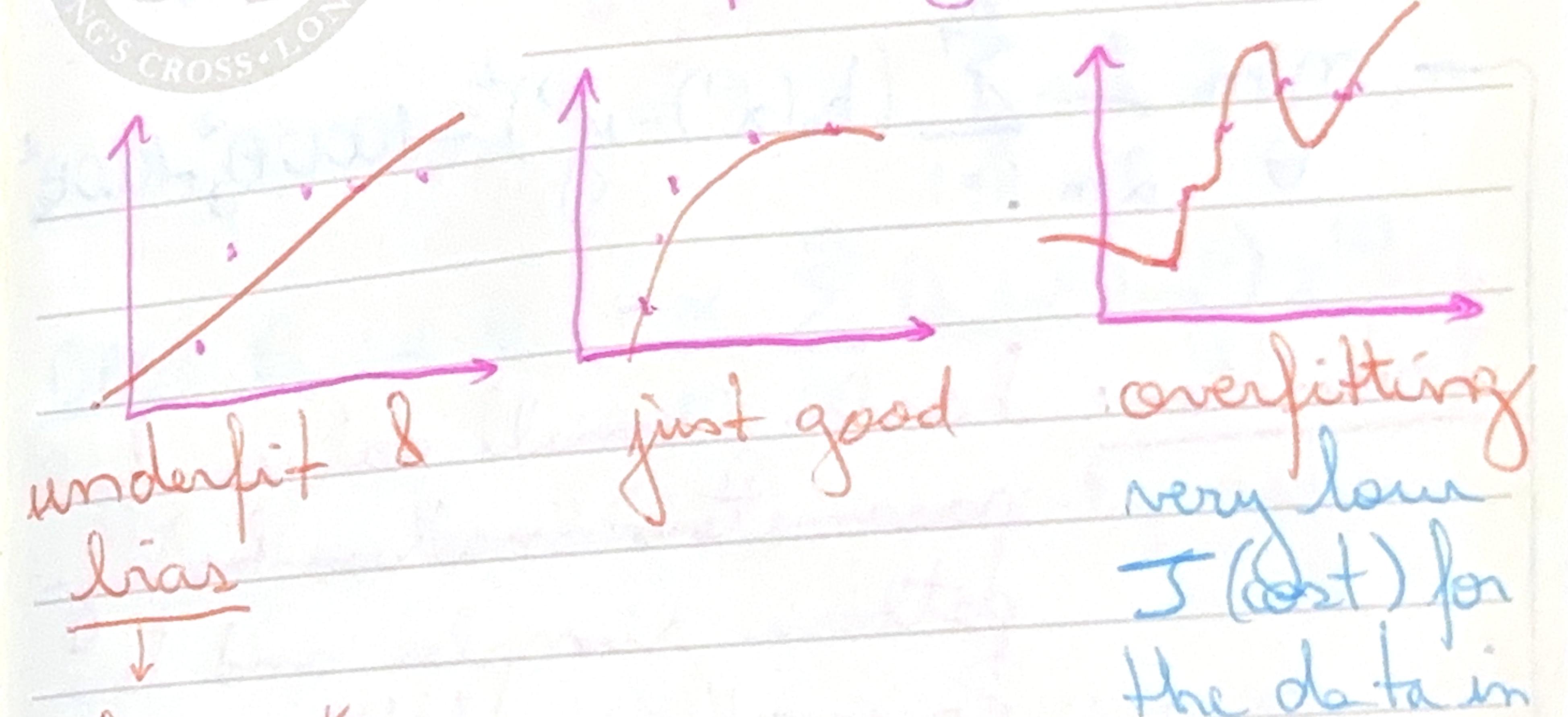


OBS: Nessa regressão, aglutanam-se as demais
classes não-j durante o cálculo dos parâme-
tos para $h_{\theta}^{(j)}(x)$.



Cajamar, 02 de novembro de 2018

Overfitting



when picking
the model

To address overfitting:

1. Reduce # features
 - manually
 - model selection algorithm

2. Regularization

- Keep all features, but reduce their magnitude
- works well when having lots of features, each contributing a little bit to predict y