STAT593: Robust Statistics

or... an introduction to Beamer instead

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Introduction

A first example

A second example

Conclusion

Display a theorem and talk about it

Theorem

$$a^2 + b^2 = c^2$$

Here, the response vector Y is **qualitative**.

Example: $\mathcal{Y} = \{\text{spam}, \text{ham}\}\ (\text{ham}=\text{correct e-mail})\ \text{or}\ \mathcal{Y} = \{0, 1, \dots, 9\}.$

The objective could be

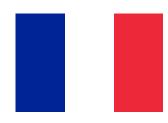
lacktriangle create a classifier $\phi(x)$ that maps x to one of the classes in ${\mathcal Y}$

Double column when needed

Bayes classifier is optimal

$$\phi^*(x) = \operatorname*{arg\,max}_{y \in \mathcal{Y}} P(Y = y | X = x)$$

for the loss $l(y, y') = 1_{y \neq y'}$.



One can always use $\widehat{\phi}(x)$.

Alternatives:

- ► logistic regression / LDA
- GAM
- ► SVM

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Bibliographie

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