

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

The objective could be

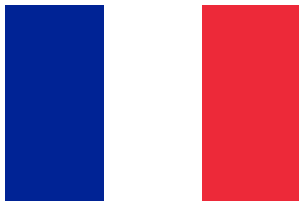
- ▶ create a classifier $\phi(x)$ that maps x to one of the classes in \mathcal{Y}

Double column when needed

Bayes classifier is optimal

$$\phi^*(x) = \arg \max_{y \in \mathcal{Y}} P(Y = y | X = x)$$

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



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

Alternatives:

- ▶ logistic regression / LDA
- ▶ GAM
- ▶ SVM

Empty

... or so.

But note that

is also possible

and is simple to use. And a common issue is not using the percentage symbol (%) enough !

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Rapidement

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- **Joseph Salmon :**
 - ▶ current situation: Professor at Université de Montpellier

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- ▶ Bureau: 415, Bat. 9

Bibliographie

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