Inferential Statistics

25/01/24
14/02/24
06/24
06/24
09/24

1 pagina con appunti, no libri

Voto esame + pti bonus
- partecipazione alle lezioni → [0,3]
- valido per tutto l'anno

Valuta il procedimento e non il risultato

"Mathematical Statistics, Hogg Mckean Craig"

"Exercises and Solutions in Statistical Theory"

Utilizziamo "R" (simile a Python)

Introduction

Statistics is a way to better understand a problem and helps making an algorithm

There are 3 main steps in inferential statistics:

1) Translate the problem in terms of a statistical model
2) Fit the model with the data
3) Translate the output of the model in terms of the original problem

2 key points during these steps:

1) choice of the statistical model → there isn't just one solution
2) fit the model to the data

Choosing the model is hard: - "every model is wrong" (always just an approximation)

↓

we never end with the "right" one

- carefully chosen models can be useful

ESTIMATION: estimate the most probable outcome by testing

↓

lots of samples, can't measure all

HYPOTESIS TESTING: use the data collected to validate an hypotesis

CONFIDENCE SET: which is the variability of my results

Based on our problem we can have different models:

	Parametric	Non-parametric
Frequentist	...	...
Bayesian	...	...