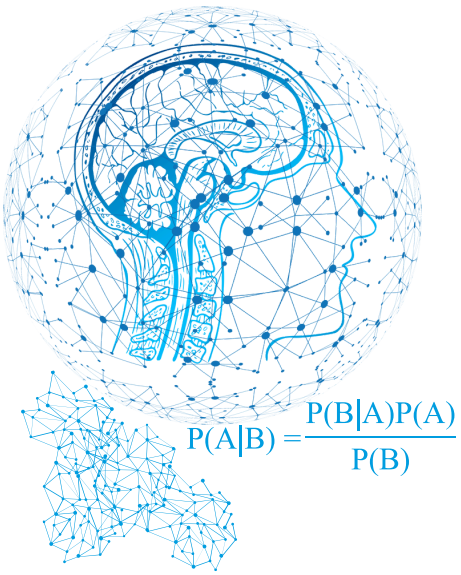
Graduate program
Digital Public Health

université de BORDEAUX

Introduction to the Bayesian framework for biometrics



Delve into the world of Bayesian analysis and harness its power for statistical modeling! This course assumes proficiency in R programming and maximum likelihood estimation. **Over five days**, PhD students enrolled in this course will gain a solid foundation in **Bayesian statistics**, explore **Markov chain Monte Carlo (MCMC)** methods with **rjags software**, and learn to build **hierarchical models**, perfect for tackling complex data structures.

Day four focuses on modeling longitudinal data, including mixed models and survival analysis. To solidify their newfound skills, **the final day features a collaborative hackathon** where they'll apply these techniques to a real-world use case in teams of two.

Prerequisites

This course is open to PhD students with pre-acquired knowledge in R Programming and Maximum Likelihood Estimation.

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Introduction to the Bayesian framework for biometrics

PROGRAM

D1: introduction to Bayesian statistics
D2: introduction to MCMC and rjags
D3: hierarchical modeling
D4: modeling longitudinal data (mixed-models and survival analysis)
D5: guided hackathon on a real use-case in groups of 2

Training method : Alterning between slides presentations and hands-on practicals.

Training Objectives

This training course aims to equip students with a solid foundation in **Bayesian analysis**. By the course's conclusion, students will be able to not only grasp the core principles of Bayesian statistics but also confidently apply **Markov chain Monte Carlo (MCMC)** methods to perform estimations. This will allow them to analyze complex data and draw informed conclusions by incorporating prior knowledge and uncertainty into their statistical models.

Registration deadline :
Date :
Schedule :
Place :