Programme:

1) Bayesian Statistics ED
Scheduled: 13 Mar 2023 at 14:30 to 18:00, CET
(15 minute break in the middle)

2) Bayesian Statistics ED
Scheduled: 14 Mar 2023 at 09:30 to 13:00, CET
(15 minute break in the middle)

3) Bayesian Statistics ED
Scheduled: 14 Mar 2023 at 14:30 to 18:00, CET
(15 minute break in the middle)

4) Bayesian Statistics ED
Scheduled: 16 Mar 2023 at 09:30 to 13:00, CET
(15 minute break in the middle)

5) Bayesian Statistics ED
Scheduled: 17 Mar 2023 at 09:30 to 13:00, CET
(15 minute break in the middle)

6) Bayesian Statistics ED
Scheduled: 17 Mar 2023 at 14:30 to 18:00, CET
(15 minute break in the middle)

7) Bayesian Statistics ED
Scheduled: 9 May 2023 at 09:30 to 13:00, CEST
(15 minute break in the middle)

8) Bayesian Statistics ED
Scheduled: 9 May 2023 at 14:30 to 18:00, CEST
(15 minute break in the middle)

9) Bayesian Statistics ED
Scheduled: 11 May 2023 at 10:00 to 13:00, CEST
(15 minute break in the middle)

10) Bayesian Statistics ED
Scheduled: 11 May 2023 at 16:45 to 18:00, CEST

Course information

The course will cover the foundations and applications of Bayesian Statistics. The course will you the central concepts, starting from conditional probability and through inference, model comparison using the evidence, analytical solutions, and computational techniques such as Markov chain Monte Carlo, and implicit inference (simulation based inference) using deep learning.

The focus is on a clear and deep understanding of the concepts through an interactive format that alternates exposition of new ideas, worked examples, exercises, and practical applications.

The course will be given in English.

Note: 3 days in March, 2 days in May.

I will adapt it and the course material to respond to your specific needs and interests, so please think about what you would like to get out of this course and tell me on the first day!

Presentation of new material will be interspersed with exercises, as appropriate. You will be doing mini-projects in small groups (2-4) and present your results on the morning of the last day. I will suggest topics for mini-projects but am open to topics drawn from your research. You can code in your preferred language.

All my examples will use Mathematica, a very convenient mathematical modeling language. All Sorbonne U.~students have access to a free software license (Log on to http://mon.upmc.fr, then from Outils select Logiciels and click on the Mathematica link, listed uder Accès rapides) . If you have never used Mathematica please watch the video tutorials http://www.wolfram.com/broadcast/screencasts/handsonstart/ before the course (in English). See http://www.wolfram.com/support/learn/ for further information. An introduction to Mathematica in French is available at http://www.lct.jussieu.fr/pagesperso/toulouse/enseignement/cours_mathematica.pdf .