

Statistical Consulting Unit

Workshops/Training courses

Fall 2022

Workshop #4

Title: Introduction to Bayesian Statistics

Statistical Software: R

Requirements: Intermediate level of statistics

Instructor: Dr. Ali Gargoum

Target Group: Postgraduate students and research workers

Date: 7 Nov. 2022 - 20 Nov. 2022

Period: 3 days, 4 hours/day

Platform: Online/Zoom Meeting

Inclusive of Scientific Materials: Seminars include live lectures, hands-on exercise assignments, and plenty of chances to ask questions. PowerPoint Slide Presentation and E-Certificate.

Description:

Bayesian approach is becoming increasingly popular in all fields of data analysis. It also plays an increasingly important role in data mining and deep learning. This workshop will be a first step into Bayesian statistics. It will investigate the underlying theory and fundamental concepts by way of simple and clear practical examples.

Topics Covered:

1) Bayes' Theorem. Differences between classical (frequentist) and Bayesian inference. 2) Posterior inference: summarizing posterior distributions, credible intervals, posterior probabilities, and posterior predictive distributions. 3) Gamma-poisson, beta-binomial and normal conjugate models for data analysis. 4) Bayesian regression analysis. 5) Use of simulations for posterior inference. Simple applications of Markov chain-Monte Carlo (MCMC) methods and their implementation in R.

Workshop Fee: 1500 AED

Note: A certificate of completion of the workshop will be provided to participants.

Contact US: statconsult@uaeu.ac.ae