

Bayesian Notes for building the geostatistical MANOVA-KNN pipeline

Roxana Tesileanu

roxana.te@web.de
INCDS, Romania

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1 Introduction

Note

This document is "under construction". It contains older notes of mine on Bayesian data analysis. Some were used in technical reports of mine (see https://www.researchgate.net/publication/317549069_poisson_model) and also new sections aiming at creating the background necessary for the implementation of the MANOVA-KNN pipeline in geostatistics using the idea of **posterior predictive checks** (Introduction and Deduction in Bayesian Data Analysis, Andrew Gelman, 2011) [1]. For this purpose, I will have to work through books building up my skills, fortunately I was given a hint (and a copy) by a friend on "Bayesian Data Analysis for Social Sciences" by Simon Jackman (Wiley, 2009) [2] and "Bayesian Data Analysis" by Andrew Gelman, John B. Carlin, Hal S. Stern, David B. Dunson, Aki Vehtari and Donald B. Rubin (CRC, 2014) [3]. Please download the current version from my GitHub profile under the multivariate_analyses project repository: https://github.com/RoxanaTesileanu/multivariate_analyses/blob/master/literature_analysis/geospatial_scala/bayesian_notes_geosp.pdf.

The statistical plots in this document were generated in Scala using the JavaPlot package developed by Panayotis Katsaloulis [4]. You can find the scala source files used for generating them under the link: https://github.com/RoxanaTesileanu/multivariate_analyses/tree/master/DeepLearning/src/main/scala/com/mai/scalaPlot.

The present document was edited using Latex [5] (<https://www.latex-project.org/>). The source .tex file of the present document is also available in the multivariate_analyses repository on my GitHub profile. Special thanks to Gustavo Mezzetti for the Latex halloweenmath package: <http://mirrors.concertpass.com/tex-archive/macros/latex/contrib/halloweenmath/halloweenmath-man.pdf>!

References

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