Biostatistician

A biostatistician for managing and creating knowledge in clinical field is what you need.

Work experience

June 2008
November 2008

Biostatistician

Mission: To review and apply Marginal Structural Methodology for estimating causal parameters in a longitudinal setting. Application of Instrumental Variables methodology to detect and correct chanelling in observational studies.

Means: References:
[1] J.M. Robins. Marginal structural models versus structural nested models as tools for causal inference. In Statistical models in epidemiology, the environment, and clinical trials (Minneapolis, MN, 1997), pages 95–133. Springer, New York, 2000a.

[2] M.J. van der Laan and J.M. Robins. Unified methods for censored longitudinal data and causality. Springer,New York, 2002.

Programming language: SAS, R

June 2007
August 2007

Biostatistician

Mission: To implement different versions of the EM algorithm for estimating pair Hidden Markov Model parameters. To estimate the substitution rate for pairs of homologous biological sequences (DNA, protein, ...)

Means: Key words: Markov chains, Hidden Markov models, SW models in bioformatics, C++ and R programming
References:
[1] S. Bengio. An asynchronous hidden markov model for audio-visual speech recognition. Technical Report IDIAP-RR 02-26, IDIAP, 2002.

[2] R. Durbin, S. Eddy, A. Krogh, G. Mitchison, Biological sequence analysis, Probabilistic models of proteins and nucleic acids, Cambridge University Press 2002.

[3] G. Nuel, B. Prum, Analusye statistique des séquences biologiques, modélisation markovienne, alignements et motifs, Lavoisier 2007.

Appraisal: The report is available on demand or on Gregory Nuel webpage.

April 2007
June 2007

Statistical study of differential expression of genes

ENSAI feat. INRA

Mission: To compare two models of the intra-genes variance. The models were structural models and both suggested to shrink the variance using a bayesian prior. My work consisted first in a comparison of both methods based on the sensitivity, the specificity, the false positive and false negative rates; then in classifying the genes differentially expressed so as to appreciate their nearness. I was involved in a team made of four colleagues and supervised by Dr F. Jaffrezic, statistician at the INRA (National Institute of Research in Agronomy).

Means: Mixed models, Bayesian statistics backgrounds, R programming

January 2006
February 2007

Quality manager

ENSAI junior Consultant

Mission: Within a team of 14, my role in the Junior Enterprise of the ENSAI, has consisted in establishing organization processes and writting a quality control handbook. I have additionally worked as IT manager during the same period.

April 2006
June 2006

Assessment of the metrological properties of the FACT-G scale

ENSAI feat. INSERM

Mission: To assess the metrological properties of a quality of life scale, namely the Functionnal Assessment of Cancer Therapy-General (FACT-G). The ability of the FACT-G scale to measure quality of life of cancer patients have been already desmontrated in previous studies. This additionnal study aimed at comparing the coherency of the French translation of the questionnaire. I was involved in a team made of four colleagues and supervised by N. Costet, statistician at the INSERM (National Institute of Health and Medical Research).

Means: General needs: ability to work in team efficiently.
Technical needs: ANOVA, M-Estimation, Tests Theory, and more generally backgrounds of inferential statistics.

Appraisal: The conclusion of our study have been consistent with the previous assessments that have been already published. We have been able to bring to light some typical problems due to the psychometrical measures such as the response shift effect. Ours conclusions have then contributed to broaden the use of the this scale. The whole report is available.

Diplomas and education

Since
September 2005

ENSAI

Masters Degree in Statistical engineering. Main courses: Probability, Inferential Statistics, Regression methods, Robust Statistics, Non Parametric Estimations, Survival Analysis, Data Ananlysis.

Area of specialisation: Biostatistics - Clinical trials, Genomics, Statistical Genetics and Epidemiology

September 2003
July 2005

Lycée Stanislas - preparatory classes:two-years undergraduate intensive course in mathematics and physics.

National competitive examination for admission to the French "Grandes Ecoles".
Admission to the « Ecole Nationale de Statistique et de l'Analyse de l'Information » - ENSAI (French Graduate school specialising in statistics and information technology and belonging to the elite “grande école” system”)

Area of specialisation: Mathematics, Physics and Informatics

September 2002
July 2003

Lycee Notre Dame d'Afrique, Ivory Coast, Africa.

Baccalauréat with major in maths and physics.

Computing skills

Software

SAS 9.1 (previous versions)
SPAD (5.0 et 6.0)
Word, Excel, Powerpoint.
R 2.3.0

Languages

Java 1.5
C, C++
SQL

Additional information

Implementation of EM, SEM and SAEM algorithms in C++.
Langage processing project in Java.

Language skills

Spanish

Speaking competence: School level, **Written competence:** School level

French

Speaking competence: Native speaker, **Written competence:** Native speaker

English

Speaking competence: Fluent, **Written competence:** Fluent

Various

Salsa

I really enjoy Latin dances especially salsa that I have practiced for two years.

BlueFunk

I have been singer and guitarist in a funk band for two years. We have played by now more than five concerts.