Lluís Ramon Callao

Currículum vítae

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in Lluís Ramon

Education

2002 - 2007 **Degree in Mathematics**, *Universitat Politècnica de Catalunya*, Barcelona.
Degree that included a wide range of courses in several areas of knowledge:
- Pure and Applied Mathematics (Algebra, Geometry, Mathematical Modelling, Real Analysis, Differential equations).
- Statistics (Operations Research, Statistical Inference).
- Computing (Algorithmics, Programming, Numerical Analysis).

Feb. - Jun. 2007 **Socrates-Erasmus Exchange Program**, *Université Pierre et Marie CURIE*, Paris.
- Modules taught entirely in French.
- Attended Mathematical optimization, Epidemiology and Functional analysis.

Experience

Dec. 2007 - Present **Road Safety and Traffic Management Engineer**, *Servei Català de Trànsit, Generalitat de Catalunya*, Barcelona.
- Statistical analysis and reporting in the following fields:
  - Road safety
  - Breath alcohol content enforcement
  - Speed
  - Mobility
  - Traffic congestion
  - Relationship between mobility and accidents
- Preparation of contract specifications for hiring external studies. Project management and final document supervision.
- Participation in European projects and proposals to the European Commission.
- Studying and proposing policies in the frame of the Catalan road safety plan.
- Data analysis and database management of the following DBs:
  - Road accidents (24.000 entries/year on 180 variables)
  - Road mobility (4.000.000 entries/year on 20 variables)
  - Breath alcohol content enforcement (600.000 entries/year on 15 variables)
  - Traffic congestions (24.000 entries/year on 25 variables)
- Development of a package in the R programming language to automate the following tasks:
  - Connection and data collection from DataWareHouse
  - Specialized functions for road safety and mobility data processing
  - Geographical representation of information and map generation
  - Mathematical-statistical model to treat mobility data
  - Mathematical-statistical model to treat speed data
  - Automatic report generation

Languages

Catalan	Native proficiency
Spanish	Native proficiency
English	Full professional proficiency
French	Elementary proficiency

IT Skills

Programming	SQL, Basic Python, TEX, Git.
Data Analysis	R, Matlab, SPSS.
OS	Windows, Mac, Linux.
BI	Microstrategy.

Courses

Feb. 2008	**Certificate of Pedagogical Aptitude**, *Universitat Politècnica de Catalunya*, Barcelona.
Apr. 2008	**Aimsun Foundation Course**, *Transport Simulation Systems*, Barcelona.
May 2009	**Microstrategy Desktop**, *Microstrategy Business Intelligence*, Barcelona.
Sep. 2010	**Public Contracts Specification Course**, *Escola d'Administració Pública de Catalunya*, Online.
Mar. 2011	**Survey sampling design and analysis**, *Institut d'Estadística de Catalunya*, Barcelona.
Apr. 2012	**Programming a Robotic Car**, *Udacity*, Online.

Publications

Abr. 2013	**Relationships flow/speed (congestion) on the arterial road network to Barcelona** , *Òscar Llatje, Enric Homedes, Ferran Muñoz, Lluís Ramon*, Revista Carreteras, Asociación Española de la Carretera.

Presentations

Oct. 2012	**Introduction to maps with R**, *Lluís Ramon*, Barcelona R user's group, Barcelona.
Nov. 2012	**A practical introduction to ggplot2 and ggmap**, *Andreu Vall, Roger Borras, Lluís Ramon*, IV Spanish R User Conference, Barcelona.