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Chris U. Carmona

PhD in Statistics (Candidate)

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EDUCATION

UNIVERSITY OF OXFORD

DPHIL IN STATISTICS
Expected Oct 2020
Supervisor: Prof. Geoff Nicholls
Research: Bayesian Hierarchical Methods, Model misspecification, Missing Data, Bayesian Nonparametrics

UNIVERSITY OF CALIFORNIA, BERKELEY

MA IN STATISTICS
May 2014
GPA: 3.9 / 4.0
Focus: Probability, Linear Models, Time series, Statistical Software.

NATIONAL UNIVERSITY OF MEXICO (UNAM)

BS IN ACTUARIAL SCIENCES
Oct 2009
GPA: 9.1 / 10 (top 3%)
Focus: Finance, Risk Management, Operations Research, Statistics, Probability.

TEACHING

OXFORD

- SC7 Bayes Methods
- SB4a & SB4b Actuarial Science
- STAT 4360 Statistical Software Programming
- STAT 4210 Statistical Methods
- CSCI 2610 Discrete Mathematics for Comp. Science

UC BERKELEY

- STAT 135 Concepts of statistics

UNAM

- Statistical Learning
- Construction and evaluation of actuarial models

HONORS & AWARDS

- Mexico Science and Technology Council, Scholarship for Graduate studies (2013, 2016).
- Central Bank of Mexico, Scholarship for Graduate studies (2013, 2016)
- Fulbrigth Program Scholar (Dept. os State, U.S.A.) (2013)

PROFESSIONAL

AMAZON WEB SERVICES (AWS)

MACHINE LEARNING SCIENTIST INTERN
Sep 2020-Present | Berlin

- Research on large-scale probabilistic forecasting using deep learning.

FINANCIAL NETWORKS ANALYTICS (FNA)

RESEARCH DATA SCIENTISTS
Aug 2019 - Aug 2020 | London

- Developed methods for anomaly detection in dynamic relational data.

CENTRAL BANK OF MEXICO (BANXICO)

SENIOR FINANCIAL RESEARCHER
Jun 2011-Sep 2016 | Mexico City

- Financial risk management for Mexico's international reserve portfolio.

RESEARCH

OXFORD COMP. STATISTICS AND M.L. GROUP

Department of Statistics, University of Oxford
Oct 2016 - Present
Robust methods for Bayesian Inference in multi-modular settings under model misspecification and copious missing data.

CENTRE FOR STUDIES ON DEVELOPMENT

NAT'L UNIV. OF MEXICO | RESEARCH ASSOCIATE
Feb 2011-Nov 2011 ; Sep 2014-Dec 2015
Consultancy project to create models for the estimation of multidimensional poverty indicators in small areas in Mexico. The project generated the official poverty indicators at municipality level in Mexico for 2010 and 2014.

PUBLICATIONS

- Carmona C., Nicholls G. (2020). Semi-Modular Inference: enhanced learning in multi-modular models by tempering the influence of components. AISTATS 2020 (download).
- Carmona C., Martinez-Jaramillo S. (2020). Learning of Weighted Dynamic Multi-layer Networks via Latent Gaussian Processes. International Conference on Complex Networks and Their Applications, 2019. (download)
- Carmona C., Canale A., Nieto-Barajas L. (2019). Model-based approach for household clustering with mixed scale variables. Advances in data analysis and classification. Springer. (download).
- Martinez-Jaramillo S., Carmona C. (2019). Interconnectedness and financial stability. Journal of Risk Management in Financial Institutions. (download).
- de la Concha A., Martinez-Jaramillo S., Carmona C. (2017). Multiplex financial networks: revealing the level of interconnectedness in the banking system. Complex Networks and their Application, volume VI. Springer (download)

SOFTWARE

- Python module: `PyDMN`. Variational Inference of Dynamic Weighted Networks via latent Gaussian Processes. (Github)
- R package: `BNPMIXcluster`. Model-Based clustering with mixed scale variables. (CRAN)