DANAE MARTÍNEZ

Data Scientist

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EDUCATION

M.Sc. in Statistics
Université de Montréal

📅 2019

Bachelor's degree in Mathematics (orientation actuarial science)
National Autonomous University of Mexico, UNAM

📅 2014

Academic exchange
Université de Montréal

📅 2013

WORK EXPERIENCE

Data Science Consultant
Raymond Chabot Grant Thornton

📅 October 2019 - Present 📍 Montréal, Canada

- Participation in the following steps
  1. Project kick-off - needs assessment and understanding of the client's business context;
  2. Project development - application of statistical and learning techniques to design solutions to address client's needs;
  3. Progress monitoring - maintaining contact with the client throughout the project and provide relevant clarifications;
  4. Preparation of deliverables - dashboards containing statistical analyses/models, reports, presentations, etc.
- Customer segmentation: Identification of customer patterns based on socio-demographic variables through the application of unsupervised classification algorithms.
- Time series analysis for market price forecasting.
- Application of computer vision techniques to extract information from images, such as cheques, invoices, etc.

Data Scientist (Intern)
Hydro-Québec

📅 April - October 2019 📍 Montréal, Canada

- Data manipulation analysis with R, SQL and SAS.
- Verification of ensemble predictive systems for wind power generation.
- Data visualization.
- Preparation of the written report and documentation of the applied methodologies.

MIS Data analyst
citibank

📅 2015 - 2016 📍 Mexico city

- Development of time series models with R.
- Customer segmentation.
- Delivery of financial flow tracking reports.
- Development of analytical strategies for the collection of accounts.

Data analyst (Intern)
Faculty of Medicine, UNAM

📅 February - July 2014 📍 Mexico city

- Development of a logistic regression model to predict school drop-out.
- Identification of risk factors leading to dropping out from school.
- Production of reports and presentations for the disclosure of results.

INFORMATICS SKILLS

- Python - Scikit-Learn, PyTorch, OpenCV, Tesseract, spaCy
- R - Shiny, Markdown, ggplot, dplyr, tidyr
- SQL,
- LaTeX,
- SAS,
- C++,
- *SPSS*.

COURSES AND WORKSHOPS

Machine Learning Winter School
Université Laval

📅 march 2020 📍 Québec city

- Machine learning, regression and linear models, supervised learning, model evaluation and selection, deep learning.

Thematic Workshop in Finance and Insurance
Institute for data valorization, IVADO

📅 may 2018 📍 Montréal

- Machine learning, supervised learning, neural networks, NLP in finance and reinforcement learning.

TEACHING EXPERIENCE

Teaching assistant

Université de Montréal

📅 2017 – 2019   📍 Montréal, Canada

- Course teaching: differential calculus, integral calculus, introduction to statistics, statistics for social sciences and survival models.
- Preparation and presentation of exercises during workshop sessions.
- Exam monitoring.
- Participation in the grading of exams and homework.
- Participation in individual student counselling sessions.

Facilitator of thematic workshops

Applied Mathematics and Actuary Training, AMAT

📅 2016   📍 Mexico city

- Workshop "Analysis and applications of time series with R "
- Preparation and presentation of contents (presentations, course notes and sample codes).
- Correction of exercises and final projects.

Auxiliary teacher

Faculty of Science, UNAM

📅 2014 - 2016   📍 Mexico city

- Courses: statistical inference, time series analysis and risk theory.
- Preparation and presentation of exercises during practical sessions.
- Exam monitoring.
- Participation in students' evaluations.

Private tutoring

📅 2012-2019

- Support for college and university students in mathematics and statistics.

SKILLS

- Trilingual. French (DELF certification), English (TOEFL certification), Spanish.
- Communication and writing skills.
- Effective teamwork, autonomy, resourcefulness.
- Adaptability.
- Analytical thinking and Intellectual curiosity.
- Rapid learning.
- Effective problem solving.

AWARDS AND SCHOLARSHIPS

- Excellence scholarship from the Institute of Mathematical Sciences, ISM.
- Supplementary Tuition Exemption Scholarship for International Students, AMEXCID.
- Academic Excellence Scholarship for International Mobility. *Fundación Televisa*.
- Excellence in Academic Achievement Scholarship *Fundación UNAM*.

RESEARCH CONTRIBUTIONS

Cox regression with latent partitions derived from the Potts model. Master's thesis.

- Development of a nonparametric Bayesian regression model from random partitions in a survival analysis context.
- Application of MCMC methods to perform model estimation and inference.
- Realization of stochastic simulations for model comparison.

***Cox Regression with Potts-driven latent clusters*. Conference.**

- Lecture presented at the 23rd International Congress on Computational Statistics. Iasi Roumanie.

***Logistic Regression Model for the Academic Performance of First-Year Medical Students in the Biomedical Area.* Article.**

- Article published in the journal *Scientific Research Publishing*.
- Development of a mathematical model to predict and identify risk factors for dropping out in the first year of the undergraduate medical program.