Henry D. Chacón

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Objective

Develop advanced skills in analytical research for complex problems in processes, financial risk management, investment portfolios optimization, supply chain, and business, through the use of statistical methodologies, data mining optimization, deep learning, business intelligence and software development in big data contexts.

Summary of Qualifications

- Demonstrated ability to propose and develop solutions in real data environments based on emerging computer heuristics and deep learning techniques, such as genetic algorithms, getting a reduction of 750 engineering hours a year in Telefonica Movistar Venezuela.
- Nine years of experience in telecommunication and financial sectors including capacity planning, network design, business offers and two years as supervisor of teams up to 15 members.
- Proficient in several computational languages such as Python, R, Visual Basic for applications (Excel) and databases.
- Versatile skill sets with experience in customer service, problem-solving approach, quantitative analysis, innovation, teaching, and abilities to tailor message to different audiences.

Awards

2010: **Bravo Award** granted by the Telefónica's CEO for a proposal and development of a Java tool employed by the Planning and Performance Venezuela CORE group to reduce an estimated of 750 man/hours a year in distribution of GPRS - GSM cards implementing Genetic Algorithms and Multi-criteria Decisions Making; currently in operation.

2008: Recognition conferred by Movistar network VP's for outstanding achievement in recommending a platform expansion by statistical models and forecast theories, saving around $100K in infrastructure expenses.

Education

The University of Texas at San Antonio — San Antonio, Texas
Doctor of Philosophy in Applied Statistics - Candidate — Expected Spring 2021
Currently, my research is focused on machine learning methods and the security of AI algorithms in poisoned and backdoor attacks.

Instituto de Estudios Superiores en Administración — Caracas - Venezuela
Master of Finance, Thesis: Optimal Portfolio Strategies Comparison. — June 2012

Universidad Central de Venezuela — Caracas - Venezuela
Completed 48 credits toward a Master of Science in Operation Research — July 2010
Main focus in multi-criteria decision and emerging computing heuristics such as neural networks, fuzzy logic, genetic algorithms and cellular automotas

Universidad Nacional Experimental del Táchira — San Cristóbal - Venezuela
Bachelor of Science, Electronic Engineering, Rank: 4/25 (Top 15%) — June 2003

Developed Applications

- An interactive web application built in `R` and `Shiny` to get SARIMA models for time series analysis. Implemented features include: loading csv files, Box-Cox transformation, seasonal and non-seasonal differences and comparison between models. Link: https://henrychacon.shinyapps.io/SARIMA/

Teaching and Research Appointments:

The University of Texas at San Antonio — San Antonio, Texas
Research fellow at the Secure AI & Autonomy Laboratory — January 2019 - Present

- Research leader for different projects applied to financial and oil field companies.
- Mentoring of Master in Data Science students for projects related to the stock market, NLP methods, and customer segmentation.

The University of Texas at San Antonio — San Antonio, Texas
Instructor of Business & Basic Statistics, undergraduate course — August 2017 - December 2018

- Appointments:
  - Fall 2018 - STA 1053, Basic Statistics, sections: 4 (170 students), 5 (50 students)
  - Fall 2018 - MS 1023, Business Statistics with Computer Applications, section 2 (125 students)
  - Spring 2018 - STA 1053, Basic Statistics, section: 7 (65 students)
  - Fall 2017 - STA 1053, Basic Statistics, section: 6 (135 students)

Universidad Monteávila — Caracas - Venezuela
Instructor of Econometric Introduction, undergraduate course — September 2013 - July 2014

- Focused on how to use real data to do analysis, from open source sites such as GapMinder and National Central Banks. Students were mentored to do a research, defining hypothesis, checking assumptions and making conclusions, through the statistical package eViews. Class size: 50 students.

Industry Experience

Venezuelan Investment Partners — Caracas - Venezuela
Financial Analyst — October 2013 - July 2014

- Constructed a portfolio report tool in Visual Basic for Application of Microsoft Excel and Bloomberg for more than 200 assets.
- Improved production time in around 95% in delivering financial reports for six major clients.

Servicios Cellnetca, C.A. — Caracas - Venezuela
Project Manager for ZTE - Corpoelec Project (Freelance) — October 2013 - July 2014

- Coordinated all activities in a national project to upgrade thirty electric stations. Under supervision: 4 managers and 10 technicians.
- Selected and acquired all signal measuring and testing equipment for $100K, saving $20K in budgeting.
- Reduced 30% employee turnover of back office support group of 3 supervisors and 9 engineers.

Telefónica Movistar — Caracas - Venezuela
Detailed Positions: — October 2006 - June 2013

- **Network Performance Supervisor (2012-2013):** Coordinated and created network reports, including failures impact, atypical behaviors detection and recommendation for network optimization actions. Under supervision: 8 engineers.
- **Wholesale Business Coordinator (2011-2012):** Developed of business cases and commercial offers for high capacity links proposals including new business customers and interaction with third-party providers.
- **Planning and Performance Engineer of Core Voice (2006-2011):** Conducted deployment and expansion of GSM network including two MSS and six MGWs, scope definition with providers and activities coordination for traffic migration.

Papers Presented at Conferences

- "*Improving Financial Time Series Prediction Accuracy Using Ensemble Empirical Mode Decomposition and Recurrent Neural Networks*". IEEE Access. May 2020.
- "*Deep Learning Poison Data Attack Detection*". 31^{st} International Conference on Tools with Artificial Intelligence, ICTAI 2019. Portland, Oregon. November 5, 2019.

- "*Shock Detection and Its Permanent Effect on the Volatility in the Stock Market by Using Histogram Time Series*". 22^{nd} Annual Western Hemispheric Trade Conference. Texas A&M International University. Laredo, Texas. April 12, 2018.
- "*Piecewise Solutions to Big Data - Histogram time series for the S&P 500 index*". Proceeding paper. Henry Chacón and Dr. Anuradha Roy. Joint Statistical Meetings (JSM) 2017, Baltimore, Maryland - Section for statistical programmers and analysis. Presented and accepted for publication.
- "*Reproducible research: Dynamic documents using R and LaTeX. R package: knitr*". Seminar offered to faculties and students of the Management Science and Statistics department at The University of Texas at San Antonio. September 2015.