Andres Guzman Cordero

ABOUT ME

From medicine to applied mathematics, I'm a die-hard empiricist studying how economics and mathematics help us understand and model human behaviour. My current research interests are non-linear dynamical systems, robust machine learning, signal processing and control theory with their application to economic and financial systems. I have over a year of experience with probabilistic modelling in consulting and finance.

LANGUAGES

Spanish - C2
English - C2
Dutch - B1
German - B1

SKILLS

- Machine Learning (TensowFlow, Scikit-Learn)
- Advanced Python
- Statistical Programming (R, Stata, EViews)
- Intermediate SQL, Git and VBA
- Beginner C++
- Public Speaking
- Negotiation

VOLUNTEER WORK

- Volunteer's Coordinator | "Nicolas Aguilar" Nursing Home | 2014-2015
- Vice President, Faculty Chapter, International Federation of Medical Student Associations | 2018-2019
- Head of Acquisitions | Aureus Business Week | 2020 - 2021

CONTACT

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EDUCATION

Tinbergen Institute
2023 - 2025 | MPhil in Statistical Machine Learning
- Research masters in Data Science, hosted by the EUR, UvA and VU.
- PhD-level coursework in econometrics and machine learning
- Awawarded full scholarship for the programme

Vrije Universiteit Amsterdam
2020 - 2023 | BSc. in Economics and Econometrics.
- Honours Programme student, and Education Committee Member.
- Covered courses in Econometrics and Mathematics (total of 270 ECTS)
- Thesis paired with a Research Assistantship under supervision of Professor Andre Lucas. The thesis aim at developing statistical models to predict the particle movement through space and time in dynamical systems.

Universidad Autonoma de San Luis Potosi
2016 - 2019 | BSc. in Medicine, BSc. in Surgery, MBBS. (*Stopped)*
- Award for Medical Case exposition during 10th National Congress of the UASLP Faculty of Medicine.

Stanford University
2022 | Machine Learning Certification.
- Introduction to modern machine learning, including supervised learning (logistic regression, neural networks, etc) and unsupervised learning (clustering, dimensionality reduction, recommender systems).

EXPERIENCE

2022 -2023 **ING - Quantiative Analyst**
Credit Research Team (*September - February*)
- Developed a statistical modelling to analyze the credit markets in search of current investment opportunities due to mispricing. A research report was based on this work.
- Automated and optimised a Liability model (90% time-reduction).
- Developed a nerual network to forecast statistical arbitrage opportunities in the European Credit Markets.

ALM Model Development Team *(March - August)*
- Focus on the development of a model to accurately estimate the economic capital of non-maturing deposits when accouting for CBR and Convexity Risk

2022 - 2023 **Vrije Universiteit Amsterdam**
Research Assistant
- Research on Applied Spatial General Equilibrium Models. Involvement with the optimization and calibration of the model. Redeveloped the implementation in Python.
- Wrote a paper on the analysis of commuting dynamics in The Netherlands.
- Developed a dynamic spatial econometric model to analyze the hidden effect of municipality merging in distance decay

2022 **Bit**
Researcher/Machine Learning Engineer
- As part of the team, we continuously tried and prototyped the newest technologies out there. In my projects, I worked with deep neural networks, NLP and speech recognition.
- Built rapport with clients and crafted a tailored solutions to their problem. Then created a prototype and presented the results