Luis Norberto Zúñiga Morales

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Education

Graduate, *E.S.F.M. - I.P.N.*, Mexico.   **2010–2014**
Mathematical Engineer specialized in Mathematical Finances.

Ms. Computer Science, *C.I.C. - I.P.N.*, Mexico.   **2015–2017**
Main research areas: Machine Learning, Natural Language Processing, Data Analysis, Network Science.

PhD Computer Science, *Universidad Iberoamericana*,   **2021–Present**
Mexico.
Multimodal Sentiment Analysis in Digital Social Networks.

Master thesis

Title: *Análisis de mercados financieros bajo el efecto de difusión de información en redes sociales.*

Supervisors: Ph. D. Jesús Alberto Martínez Castro, Ph. D. Herón Molina Lozano

Description: In this work we use sentiment analysis for financial applications. With the combination of natural language processing, machine learning, and time series analysis, we justify the use of public sentiment present in opinions expressed on Twitter towards companies listed in the Mexican Stock Exchange to predict the future movement of their stock prices.

Experience

Vocational

Adjunct Professor, *Universidad Iberoamericana*,   **2022–Present**
Mexico.
- Technology Trends: current trends in applied technology to business areas, mainle students from marketing, business administration, global business, hospitality, and accountancy.
- Data Intelligence: advanced Machine Learning methods, Actuary.
- Machine Learning: introduction to machine learning, Actuary.

Software Developer, *Allerstand S.A. de C.V.*, Mexico.   **2015–2021**
- Database management system with Django (Python).
- Automation of multiple manual process focused on natural language usage.
- Inventory management system enhanced with Machine Learning.
- Developed mathematical models to describe products and diverse processes.

Data Scientist, *Freelance*, Mexico.   **2019–Present**
- ○ Twitter analysis app based on the Twitter API featuring network analysis, social media mediation tools, data mining, natural language processing, and data analysis.
- ○ Data mining and analysis for a Covid-19 social network sentiment analysis focused in Mexico since the pandemic started. Article submitted and accepted at COMIA 21. Publication pending.
- ○ Currently working with Dr. César Villanueva Rivas in project *Imagen México*.
- ○ Multiple freelance projects with local business.

Software Development, *ZeroTwo Analytics*, Mexico.   **2019–Present**
This project aims to study the digital social network environment of Mexico, in particular Twitter. We monitor Mexico's daily trends at one-hour intervals and study public reactions/opinions towards daily news of Mexico's president.

Miscellaneous

Teaching, *Student Council Initiative*.   **2013-2014**
Member of a pilot program aimed to diminish the high desertion rate of freshmen by forming small groups of students and mentoring them throughout the first year of their studies.

Teaching, *Freelance*.   **2014–2020**
Private study lessons, mainly advanced mathematical subjects.

Investments, *Freelance*.   **2018–2019**
Managed funds for investment in the Mexican financial market with different mathematical models.

eSports, *Technology Advisor*.   **2018–2020**
Member of Team Rankstar, American esport organization focused on competitive digital card games. Analyst, writer, technology advisor, and social media analyst.

iZMath, *Educational Content Creation*.   **2020–Present**
Pilot program that focuses on always-available online-based mathematical learning resources for the Hispanic community.

Languages

English: 108/120   *TOEFL iBT*
French: Medium   *Certification Pending*
Japanese: Basic   *Still Learning*
Spanish: Native

Computer skills

Data Visualisation: Tableau, Pandas
General Programming: Python
API: Twitter, New York Times, Google Analytics
General Software: LaTeX, Excel, Word, Matlab, Google Docs

Certifications

- ○ Design Database MySQL
- ○ Fundamentals of Web Design

Online Courses

Update: The academic institution that offered this specialization pulled the course from Coursera and the certificates are no longer available.

○ Essentials of Corporate Financial Analysis and Decision-Making (Four course specialization), Coursera.
  ○ Alternative Approaches to Valuation and Investment,Coursera.
  ○ The Role of Global Capital Markets, Coursera.
  ○ Corporate Financial Decision-Making for Value Creation, Coursera.
  ○ The Language and Tools of Financial Analysis, Coursera.

Interests

Learn from Data: Data science topics and their applications to improve quality of life. Deep learning/Machine Learning in multiple areas.

Social Network Analysis: Take advantage of latent information hidden in social networks to provide robust tools for better decision making.

Investment Tools: Novel models for investment (equity markets) considering the current networked economy. Traditional approaches are also considered for a more conservative crowd.

Education: Research for effective teaching/learning. Content creation, mainly videos, to help people in specific knowledge areas: mathematics, data science, and finances.