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ABOUT ME

"I am a very curious person who loves discovering the complexity of the world, I'm happy doing research on complex systems, geospatial data analysis and mathematical biology; I also love studying the dynamics of geopolitical networks, especially the Chinese phenomenon. Even so, my motivation is to contribute to changing the social reality of Mexico."

EDUCATION

Bachelor Studies in Applied Mathematics (in progress) 2025
Universidad Nacional Autónoma de México, CU

RESEARCH PROJECTS

AI - Based Artifact Detection in EEG Signals

- ✓ Building an AI to detect artifacts in EEG signals.
- ✓ Training a LSTM neural network
- ✓ Using the Kuramoto model looking for synchronization throughout the brain.

Hackathon: Hack the goal

- ✓ Solve the mobility problem during the FIFA World Cup 2026 in Mexico
- ✓ Design a methodology and an algorithm to solve this problem in general.
- ✓ Adapt this solution to the 3 mexican headquarters.
- ✓ Design a business plan.
- ✓ Discuss this project with experts on the subject and expose it.

PRESENTATIONS

- ✓ AI-Based Artifact Detection in EEG Signals, C3 UNAM, CDMX (10 June 2025)
- ✓ ¿What is MUN and what is it for?, Practical Workshop IMEF, CDMX (16 July 2025)
- ✓ ¿How to be a delegate and not to die trying?, Practical Workshop IMEF, CDMX (04 July 2025)

COMPUTATIONAL

- **Python:**
 - ✓ AI: Keras, TensorsFlow, Optuna.
 - ✓ Visualization: Seaborn, Matplotlib.
 - ✓ Numerical Methods: Scipy(odeint), Numpy.
 - ✓ Data: Pandas, Open Street Maps.
- **Others:**
 - ✓ R
 - ✓ Postgresql
 - ✓ Linux
 - ✓ Latex

EXPERIENCE

Research Director

Feb 2024 – Dec 2024

IMEFU MDL UNAM FC, CDMX

- ✓ Lead a +100 members group of students to introduce them into finance.
- ✓ Arrange and participate in debates on financial issues.
- ✓ Write articles for a nacional gazette.
- ✓ Organize and direct presentations.
- ✓ Teamwork to collaborate with another universities throughout the country.