

# Roberto Alejandro Gutiérrez Guillén

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Machine Learning Engineer / Product Manager

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## Education

### Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI)

Abu Dhabi, UAE

*Master of Science in Machine Learning (GPA 3.6/4.0)*

*August 2021 – June 2023*

- **Research focus:** Federated Reinforcement Learning, NILM Time Series, GANs, Power Grid Optimization.
- **Relevant coursework:** Optimization, Probabilistic & Statistical Inference, Advanced Machine Learning, AI Maths.
- **Activities:** 1st place in Hack for Space and Cisco Challenge, 3rd place in Project Set UAE.

### Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM – Santa Fe)

Mexico City, Mexico

*Bachelor of Science in Computer Science (GPA 94/100)*

*January 2016 – December 2020*

- **Study abroad:** International Business Exchange Program at **Fudan University** in Shanghai, China.
- **Activities:** [ICPC](#) LatAm Regional Finalist, 2<sup>nd</sup> [Place/150 Bus Challenge](#) [INCmtty](#).

## Experience

### JP MORGAN CHASE & CO

Mexico City, Mexico

*Software Developer*

*February 2021 – July 2021*

- Managed and executed several LatAm technology projects from draft to completion, involving dozens of teams in 8 different countries.

### PROCTER & GAMBLE

Mexico City, Mexico

*Brand Management Scholar*

*February 2020 – December 2020*

- Coordinated the launch of a new product line, including in-store strategy and media, resulting in more than 2% growth for the category.

### GOOGLE

(Remote) Boston, USA

*Software Product Sprint Participant*

*May 2020 – August 2020*

- Authored a web application using Java, JS, HTML, CSS, and YouTube API to watch videos with others.

### JP MORGAN CHASE & CO

Mexico City, Mexico

*System Architect Intern*

*November 2019 – February 2020*

- Led dozens of internal audits for critical LatAm transaction systems and updated their internal documentation.

### CEMEX

Biel/Bienne, Switzerland

*Corporate Intellectual Property & Intangible Assets Intern*

*August 2018 – November 2019*

- Led initiative to organize a hybrid event about intellectual property. Logistics included more than five time zones, 16 countries attending virtually, and more than 60 people.

## Projects

### MAHTM: A Multi-Agent Framework for Hierarchical Transactive Microgrids

[PAPER](#) | 2023

- Authored an ICLR Workshop accepted paper, where a Federated Reinforcement Learning framework is used to reduce the price of electricity and the CO2 impact of the grid.

### NILM

[REPO](#) | 2022

- Authored an improved Multi-Label Non-Intrusive Load Monitoring (NILM) method with clustering via GMM and MySignal2Vec algorithm for efficient low-end embedded device deployment.

### Who wants to be a painter

[REPO](#) | 2021

- Benchmarked and analyzed two state-of-the-art generative model techniques for style transfer using LapStyle (PaddlePaddle) and StyleGAN-ADA(TensorFlow) for Monet paintings.

### N-body simulation

[REPO](#) | 2020

- Programmed and deployed 3D interactive physics simulation of the N-Body problem with ODEX and Three.js.

## Skills and languages

**Programming languages:** Python, C/C++, MATLAB, Java, SQL, JavaScript, Prolog. | **Languages:** C2 English/Spanish.

**Others/frameworks:** PyTorch, NumPy, Matplotlib, SciPy, Pandas, OpenCV, Open MP, OpenGL, GCP, Azure, AWS, VR SDKs, Unity, PowerBI, MySQL, MongoDB, Apache Spark, Angular, Ionic.