Roberto Alejandro Gutiérrez Guillén

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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, 2nd Place/150 Bus Challenge INCmty.

Experience

OMICRON ENERGY — Klaus, Austria
Machine Learning Engineer — *October 2023 – Present*
- Built and deployed a complete LLM Retrieval Augmented Generation (RAG) solution from scratch. The multimodal chatbot can answer questions about any company offering and provide troubleshooting steps.

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

Skills and languages

Programming languages: Python, C/C++, MATLAB, Java, SQL, JavaScript, Prolog. | **Languages:** C2 English/Spanish.
Others/frameworks: PyTorch, NumPy, Matplotlib, SciPy, Pandas, Kafka, Kubernetes, OpenCV, Open MP, OpenGL, GCP, Azure, AWS, VR SDKs, Unity, PowerBI, Tableau, MySQL, MongoDB, Apache Spark, Angular, Ionic.