Miguel A. González Jiménez

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Education

Instituto Tecnologico de Santo Domingo - GPA 3.82 **Aug 2016 – Apr 2020**
Bachelors of Science in Software Engineering *Santo Domingo, Dominican Republic*

University of Puerto Rico - Mayaguez Campus - GPA 3.63 **Aug 2022 – June 2025**
Masters of Science in Computer Engineering *Mayaguez, Puerto Rico*

Technical Skills

Languages: Python, Java, C#, HTML/CSS, JavaScript, SQL, LaTex
Developer Tools: VS Code, IntelliJ, Google Cloud Platform, Android Studio,
Technologies/Frameworks: Linux, Jenkins, Git/GitHub, Ionic, Flask, NodeJS, .NET Framework, .NET Core, Angular, FastAPI expert, Unity3D, Laravel, SQL Server Reporting Services, AWS, Django, Docker.

Relevant Coursework

- Data Structures, Algorithm Analysis, Neural Networks, Database Management, Artificial Intelligence, Machine Learning, Software Architecture.

Experience

Freight Logistics AI (FLAI) **Apr 2020 – Present**
Software Engineer Consultant *Santo Domingo, Dominican Republic*

- Developer's Team Leader.
- Developed multiple microservices centered on route optimization, leveraging tools such as Google OR and Graphhopper; also designed an orchestrator service to seamlessly integrate with existing projects, automating the route assignment process.
- Collaborated on the deployment of services on company servers, including the installation and rollout of a dedicated on-premise server, with a primary focus on ensuring optimal reliability and uptime
- Integrated Codeclimate and CircleCI with Django and Docker.
- Developed 90% of Fintech project API, involving tasks such as: FSM architecture, Multi-role system, Tasks management using Celery for async operations, Hostname filter to manage access to certain data.
- Implemented Back-end projects using FastAPI for practical demos on FSM architectures

Research Experience **August 2022 – June 2025**
Graduate Researcher *Mayaguez, Puerto Rico*

- Conducted research on mitigating radio-frequency interference (RFI) in microwave radiometric measurements for K-band frequencies, specifically focused on improving water vapor profile accuracy using deep learning techniques.
- Implemented a Water Vapor Absorption Waveform model for training data generation.
- Designed and tested four autoencoder architectures (Convolutional, Sparse, LSTM, and Variational) to evaluate performance in detecting and mitigating RFI.
- Developed synthetic noise generators to simulate real-world interference and assess its impact on radiometer data accuracy.
- Collaborated with a multidisciplinary team to propose a novel autoencoder-based approach for active RFI suppression in radiometer readings.

PiTech SRL **Feb 2019 – Apr 2020**
Software Engineer *Santo Domingo, Dominican Republic*

- Developed new functionalities to the app such as dynamic action sheets with Unity3D.
- Optimized mobile app performance up to 40% faster.
- Developed around 50+ new math exercises into the app.
- Automated part of QA workflow for exercises using Python and AWS Lambda.
- Developed internal mobile/web app to improve QA and decision-making workflows.

SoftCorp **Aug 2018 – Feb 2019**
Junior Software Analyst *Santo Domingo, Dominican Republic*

- Assisted and coordinated Quality Assurance tasks for the main app funcionalities.
- Developed and maintained 10+ new automated reports for clients using Microsoft SQL Server Reporting Services.
- Fixed over 10+ minor bugs for the main application
- Performed client support tasks, addressing customer inquiries and resolving issues, leading to enhanced client satisfaction and retention.

Projects

eTutor (College project) | *Ionic, ASP.NET Core, Azure* **Apr 2020**

- eTutor is a mobile application intended to help high-school students to get tutors in order to learn and enhance their grades.
- Worked on the software achitecture design an dlead the mobile frontend.
- Coordinated the deployment using Microsoft Azure.

Leadership / Extracurricular

Center for Advance Radio Science and Engineering (CARSE) **Spring 2022 – Spring 2023**

President of the Student Leadership Counsil *University of Puerto Rico - Mayaguez Campus*

- Coordinated logistic for poster presentation.
- Co-organized lecture on "thesis proposal workshop"

FPGA Bootcamp / L3Harris / CARSE **Mar 2023**

Bootcamp Instructor *University of Puerto Rico - Mayaguez Campus*

- Gave lecture about the basics of VHDL for Field-Programmable Gate Array programming