+52 331-537-2482
mario.gzz.gal@gmail.com
mario-gonzalez-galindo
Rionzagal

Mario Gonzalez Galindo

Biomedical Engineer, Master's student

Bezons, Île de France, France

Key skills

- **Technical Skills:**
  Electronics, Data Analysis
  Signal Processing, Automation
  Machine Learning, CAD Design
  Mechanics, Control Systems
  Image Processing
- **Strengths:**
  Persistent, Self-Learning
  Teamwork, Proactive
  Pressure management
  Willing to learn
  Open-minded, Committed
  Eye for detail, Leader
  Strategic thinking
  Analytical thinking
- **Languages:**
  Spanish (native speaker)
  English (Linguaskill B2)
  French (Basic)

Software

- **Programming and Scripting:**
  Python (Advanced)
  Matlab (Advanced)
  C/C++ (Intermediate)
  C# (Intermediate)
  SQL (MySQL & MSSQL Server)
  JavaScript (In progress)
  R (In progress)
- **Design Software:**
  SolidWorks (Advanced)
  LTSpice (Advanced)
  Multisim (Advanced)
- **Document generation:**
  Microsoft Office Suite, LaTeX, HTML, CSS
- **Operative systems:**
  Windows, Linux Ubuntu

Interests

- Electronics
- Robotics
- 3D printing
- Artificial Intelligence
- Computer Vision
- Extended Reality
- Signal Analysis

Education

Msc. **Santé Biotech** 2022-to date
École Superieur d'Ingenierie Léonard de Vinci, Courveboie, Île de France, France

Bsc. **Biomedical Engineering** 2016-2021
Tecnologico de Monterrey Campus GDA, Zapopan, Jal., Mexico
Featured Courses: Signal Processing, Neuro-engineering, Medical Image Analysis and Processing, Biomechanics.

Experiences

Web Applications Developer
Aug. 2021 - To date
FlamingSoft Mexico, Zapopan, Jal., Mexico
> **Create an application for employment management and connect it to an existing database**
Research, Develop, Validate and Optimize assets for the app using *Blazor Webassembly*, Database Development and Optimization, Connection between database and app
Results: New Progressive Web Application online, can be downloaded and used offline, connected to an optimized database reduced by 15%

Semester i: Creating a medical device
Aug. 2019 – Dec. 2019
Hospital San Juan de Dios, Zapopan, Jal., Mexico
> **Create a medical device to detect and monitor panic attacks**
Research, Develop and integrate a prototype based on physiological signals
Results: A functional vest that monitors three physiological signals and detects panic attacks
> **Record the panic attacks and retrieve the records from the device**
Design and Develop the mobile application, Add communications between the device and the app
Results: A functional mobile app that communicates to the prototype and retrieves its records

Automation Engineer
Jun. 2018 - Aug. 2018
MC Engineering S.A. de C.V., Guadalajara, Jal., Mexico
> **Develop an algorithm to automate operations of packaging machines**
Research control methods, Develop control algorithms, Validate automation processes, Design, Develop and Integrate a User Interface
Results: An algorithm that automates the packaging process based on user inputs that reduces production time by 20% with a User Interface for packaging machinery control that is still used as a base for newer product generations

Mechanics Technician
Jul. 2014 - Aug. 2020
MC Engineering S.A. de C.V., Guadalajara, Jal., Mexico
> **Assemble packaging machinery**
Assemble and optimize packaging machinery and equipment for the food and beverage industry

Research & Projects

Med-Signal
Jan. 2022 - To Date
Personal Project
> **Create a Python package to simulate and analyse EEG signals**
Research EEG signals and analysis methods, Develop modules to simulate and analyse EEG signals
Results: A published Python package under Long Term Support able to simulate EEG signals

Blazor server app for company management
Nov. 2021 - Aug. 2022
MC Engineering S.A. de C.V.
> **Create a Server Web App and Database for company management**
Database Development, Design user interface and navigation, Establish client and server interactions, Generate automated reporting algorithms
Results: A published product that enhances management and productivity by at least 20%

Image processing for retinal diagnosis
Feb. 2021 - Jul. 2021
Tecnologico de Monterrey Campus GDA
> **Create an algorithm to identify the retinal components from fundus images**
Researched fundus composition and segmentation algorithms, Developed a segmentation algorithm for each component, Integrated the algorithms in a single process, Validated the completed algorithm
Results: A completed functional algorithm that is able to detect and segment each of the fundus components at a 95% confidence level and serves as a base for a Master's degree thesis

Neural network for EMG signal classification
Feb. 2021 - Jul. 2021
Tecnologico de Monterrey Campus GDA
> **Create an Artificial Neural Network to classify muscular movements**
Research EMG signal traits, Develop a signal treatment algorithm, Develop and Validate LSTM Neural Network models, Generate a compact model for MCU integration
Results: A functional LSTM Neural Network model that is able to classify 5 different forearm movements at a 95% confidence level and is able to be embedded in a micro-controller unit