# Jhonatan Yael Martinez Vargas

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**Education | ITESM CAMPUS PUEBLA (August 2019 – June 2024) - B.S. IN ROBOTICS AND DIGITAL SYSTEMS ENGINEERING | GPA 3.0**

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**Technologies & Devices:**

- **Worked with (devices):** Arduino, Raspberry Pi, Jetson Nano, ESP8266, Lidar, Camera, Kinect, Turtlebot.
- **Worked with (technologies):** Git, MQTT, SPI, I2C, MQTT, FreeRTOS, Simple Thread's, Simulink, Unity, Blender.
- **Learning:** ROS, Open CV, Computer Graphics, CUDA.

**Languages:**

Spanish (Native)
English (B2)

**Programming Skills:**

- **Proficient:** C, C++, Python, MATLAB
- **Worker with:** C#, Java Script

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**Experience:**

**RESEARCH ASSISTANT | INTERFACE Kinect - Unity| Jun - Dec 2021**
As a research assistant in a small company, I oversaw designing and animating 3D characters on Blender, to later export them to unity and be able to interact with them through the Kinect.

**Personal project | Lametric Clock.**
One of my personal projects is a copy of lametric clock, so far, I have only replicated the functionality of displaying content in the Neo Pixel arrays with a raspberry pi Pico.

**School project | MP3 Player**
The project consists of making an mp3 player, which through FreeRTOS implemented in an Arduino detects what action you want to perform and interrupts the raspberry system, to perform the action.

**School project | Simulated autonomous tractor.**
The project consists of simulating the route of an autonomous tractor which is given a route to follow within a crop field. This project used image processing to identify the way forward and control applied in Simulink to simulate the tractor and its behavior.

**School project |A basic voice identified.**
The project consists of a MATLAB code that applies the FTT, other signals tools and statistics functions to compare the audio input with stored data, to determine who is talking.

**School homework |Piano Tiles Game.**
In this homework I make a simple but functional version of the popular game "Piano Tiles," it was developed using python with OOP concepts and PYQT5.

**Extra:**
I am the Co-leader of internships department at TecBytes student group, as co-leader I support students solving coding exercises, teaching algorithms, data structures and doing mock interviews.

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**Awards:**

- 73rd place — National Contest of the Mexican Informatic Olympiad (OMI) (2017).
- 69th place — National Contest of the Mexican Informatic Olympiad (OMI) (2018).
- Honorable Mention — Regional Contest of the Mexican Math Olympiad (OMM) (2018).
- Honorable Mention — ACM ICPC México & Centro América (2018).
- 2nd place — Hackdef CTF Mexico finals (1/5 teammates) (2022).