M.SC.ENG. ALVARO HUMBERTO QUIÑONEZ RODRÍGUEZ

Responsible person seeking not only to acquire new knowledge and skills, but to demonstrate the ones I already have gained during my academic development.

CONTACT

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Alvaro H. Quiñonez R.

SKILLS

Development

C
Python
C++
HTML/CSS
Matlab

Operating Systems

Windows
Linux
FreeRTOS

Software

Microsoft Office
Data handling/analysis (MySQL, MongoDB)
Git
CAD Softwares

Embedded Systems

Arduino/ESP32
Raspberry Pi
TI MSP430

Languages

Spanish (Native)
English

REFEREES

PhD Ian Mateo Sosa Tinoco
Instituto Tecnológico de Sonora
erroba@gmail.com
+52 (644) 410-9000 Ext. 1782

Engr. Germán Paredes Zazueta
Pinnacle Aerospace, Cd. Obregon
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EDUCATION

08/2014- 06/2019
Instituto Tecnológico de Sonora

B.S in Mechatronics Engineering
(General Average: 85/100)

09/2020- 10/2022 (Expected)
Instituto Tecnológico de Sonora

M.S. in Engineering
(General Average: 95/100)

MASTER COURSES

IoT Software | Ad Hoc Networks | AI/Neural Networks | Analysis of Algorithms | Embedded RTOS | Discrete Math | Distributed Systems | Interactive Systems Design | Discrete Systems

PROJECTS

IoT Weather Station (Bacherlor's Thesis). Based on ESP32 as a central unit and the MQTT protocol to send the sensors data to a Raspberry acting as a broker. The received data is collected into a relational database and finally deployed in a dynamic website.

Smart Traffic Light System. Developed on the ESP8226 and FreeRTOS, there were a series of tasks to determine in real time the status, number and distance between cars, temperature, and to allow the operator to change the status.

Low-cost and Low-Power Air Quality and Weather Station (Masters Thesis). The previous thesis is optimized by migrating to an ultra-low power Texas Instruments MCU and LoRaWAN for the transmission. Thus, not only the energy consumption is optimized but also the system security. The data is received on The Things Network service then forwarded via MQTT to a local server on the Raspberry Pi.

Programming Languajes: *C++, Python, JS, PHP & HTML/CCS.*
Protocols/Standards: I^2C, *SPI, MQTT.*

ADDITIONAL TRAINING

- IoT Embedded System Design (ITSON).
- TALLER CONTROL DE VERSIONES CON Git y GitHub (UTMACH).
- Microcontroller Embedded C Programming: Absolute Beginners (Udemy).
- Advanced C Programming Course (Udemy).
- Beginning C++ Programming - From Beginner to Beyond (Udemy).
- Applied Analytics Using SAS Enterprise Miner (SAS).