

David Alejandro Rondón Berrio



Career Summary

David Rondón is an electronic engineer who has worked for more than 3 years in education and both hardware and software development; in regard to the hardware, he has designed and implemented various IoT devices to monitoring multiple variables and ,respect to the software, he has built different desktop and mobile apps using different programming languages and frameworks.

Summary of Qualifications

Skills:

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|-----------------|--------------|-----------------|--------------|
| • C, C++, QML | • Git repos | • Visual studio | • Arduino |
| • HTML, CSS, JS | • LabView | • Express JS | • ESP32 |
| • Ruby | • MATLAB | • Unity | • Eagle (HW) |
| • Visual basic | • Qt Creator | • MySQL | • Express JS |

Languages

- Spanish (native speaker)
- English (B1-intermediate level)

Career History

Parque Explora, Medellín, Colombia

Mar. 2019 – Now

Interactive technologies professional (Interactive museums)

Project: [Crea tu música](#) - *make your music*

- Coordinated the project production
- Defined technologies and devices to be used
- Compiled and integrated [OpenCV](#) libraries for images processing (*Qt Creator*)
- Successfully, integrated the [Ximea](#) camera SDK with OpenCV libraries
- Designed and implemented the algorithm to recognize different patterns through a Ximea Camera
- Elaborated the software architecture
- Made proprietary libraries for Midi reproduction

Project: Ministerio de educación nacional (MEN) - *Maker space*

- Defined the technologies, devices and contents for a *maker space* into the Colombian Ministry of National Education

Project: [Laberintos](#) - *labyrinths* (<http://museodelamola.org/>)

- Defined technologies and devices to be used
- Developed the main software to play a 4K video-loop and implemented an [homography](#) module for correcting the projector perspective (*C++, QML and Qt Creator*)

Project: [Atuendos](#) – *Guna dule clothes* (<https://fundacionalbertomotta.org/museo-de-la-mola/>)

- Defined technologies and devices to be used
- Developed the synchronization software (*C++, QML and Qt Creator*)

Project: [From the bridge of the ship](#) (<http://visitcanaldepanama.com/centro-interactivo-del-canal-de-panama/>)

- Designed, produced and programmed the electronic system that process and send the information generated for each device in the control panel to the main software (*Eagle, Arduino, C++ and Visual studio*)
- Elaborated the finite states machine (FSM) that define the behaviour of the main system
- Successfully, developed the main software of the interactive simulator (*C++, QML and Qt Creator*)
- Succeeded to synchronize the playback of three videos with dynamic playback of multiple audios
- Implemented the user interface

ITM, Medellín, Colombia

Jul. 2017 – Nov. 2019

Occasional lecturer

- Fundamentals of programming using pseudocode, C, C+, wiring and processing
- Fundamentals in electronic both, analogic and digital
- Microcontrollers principles
- Sensing and automation

Rhemo, Medellín, Colombia

May. 2017 – Feb. 2019

TI and instrumentation designer (Project Rhemo Care – Equine healthcare)

- Designed the finite states machine (FSM) that define the alerts system of the [Rhemo mobile app](#)
- Designed and implemented a light protocol, based on MQTT, for the data collection from horse farms through GRPS networks.
- Implemented, in an embedded system a proprietary algorithm for the heart rate acquisition in horses (*Arduino, ESP32, Wiring and C++*)
- Built two electronic wireless devices using Bluetooth low energy (BLE), GPRS and GPS

University of Antioquia, Medellín, Colombia

Oct. 2015 – Jan. 2016

Design engineer (Project SMART - public transportation and research)

- Designed and implemented an electronic sensor subsystem to extract relevant information from public busses. (*C, C++ and Qt*)
- Developed a specialized UI for the sensors data visualization (*C++ and Visual Studio*)
- Supported the development of the Auto-diagnosis module (*DBUS(Linux), C++ and Qt*)

Education

Make it real bootcamp, Medellín, Colombia

Feb. 2020 – May. 2020

<https://makeitreal.camp/>

Fullstack JS

University of Antioquia, Medellín, Colombia

Aug. 2008 – Sep. 2015

<http://www.udea.edu.co/>

BS, Electronic Engineering