# ANDRES FELIPE BAYONA MONARES

**Mechatronic Engineer | Software Engineer | R&D**

📍 Colombia    🌐 URL    🐦 URL    in URL    GitHub URL

## EXPERIENCE

### Software Engineer
**Holberton School**

📅 2020 – 2020

- The Holberton School program includes the use of full-stack technologies from low-level like assembly code and C up to higher level technologies like Python, HTML, CSS, or javascript. Several projects were developed

### AirBnb clone - RESTful API
**Holberton School**

📅 2020 – 2020

- Implementation of a RESTful API that listens to API requests for the AirBnb clone.
  https://github.com/llanojs/AirBnB_clone_v3

### AirBnb Clone - Console
**Holberton School**

📅 2020 – 2020

- A command interpreter that manages the Airbnb clone objects
  https://github.com/KarenCampo777/AirBnB_clone

### AirBnb Clone - Web Dynamic
**Holberton School**

📅 2020 – 2020

- Implementation of a dynamic response of the AirBnb clone project, using javascript.
  https://github.com/AndrewB4y/AirBnB_clone_v4

### Research And Development Engineer
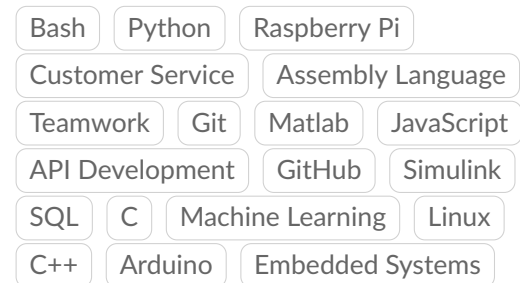**Universidad Autonoma de Occidente - Cali, Colombia**

📅 2016 – 2020

- GITCoD research group. A research group of the Universidad Autonoma de Occidente that creates and looks after solutions on distributed and remote control systems.
  The work developed there implied software development on embedded systems like Raspberry Pi, Arduino, FPGAs. The implemented codes worked with a real-time scheduling and critical time tasks solutions. There was also an implementation of communication protocols such as server-client OPC, USB serial, and MODBUS over RS232.
  Electronics designs and implementations for wearable gadgets, therapeutics prototype structure, interactive and arithmetic

## SUMMARY

Mechatronic Engineer. Research assistant implementing real-time code over embedded systems, image processing with OpenCV, and 3D CAD design. Experience in C and Python. Constant tech and software development student.

## SKILLS

`Bash` `Python` `Raspberry Pi` `Customer Service` `Assembly Language` `Teamwork` `Git` `Matlab` `JavaScript` `API Development` `GitHub` `Simulink` `SQL` `C` `Machine Learning` `Linux` `C++` `Arduino` `Embedded Systems`

## EDUCATION

### Engineer's degree
**Universidad Autnoma de Occidente**

📅 2010 – 2015

### Master's degree
**Universidad Autnoma de Occidente**

📅 2017 – 2020

### Full Stack Developer Student
**Holberton School**

📅 2020 – None

- Full-stack fundations.

game machines for kids, and analog conditioning signals for the RT emulation interaction between Rapsberry Pi and Arduino network.

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## Printf Implementation

**Holberton School**

📅 2020 – 2020

- Implemetation of the "printf" function, that produces an output according to a format specification.
  https://github.com/tatsOre/printf

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## Attractions and Operations

**Walt Disney World**

📅 2015 – 2015

- Worked in Disney's Animal Kingdom at the Tree of life area operating the "It's tough to be a bug" 4D attraction, attending over 20 thousand visitors per day, from the queue line up to hosting the show itself.

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## Food and Beverage Services

**Walt Disney World**

📅 2015 – 2015

- Fast food and beverages services in the 4 diamond resort "Wilderness Lodge", following top guidelines for high-quality guest service from the kitchen to running the tables.

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## AirBnb clone - MySQL

**Holberton School**

📅 2020 – 2020

- This stage implements the inclusion of a database storage feature on the backend interface.
  https://github.com/AndrewB4y/AirBnB_clone_v2

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## Simple Shell Implementation

**Holberton School**

📅 2020 – 2020

- A simple implementation of a shell for UNIX systems using C code language.
  https://github.com/AndrewB4y/simple_shell

# PROJECTS

📅 None – None

- Thesis development of a design and analysis tool of the integration of energy systems on a community using multiagent based programming over Netlogo tool. The implementation included

the development of an interface with Arduino in a later communication on MATLAB using OPC standard connection with an emulated microgrid.

The development showed how the community, base on probabilities and random behaviors, could converge on some desirable and non-desirable states on different conditions like environmental, resources, and economical ones.

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📅 None – None

- Development of a Raspberry-Pi based embedded system to emulate an energy decentralized distributed system. Implementing serial communication between the Raspberry's, Arduinos, and a central monitoring PC. OPC standard implementation for scalability on multiple systems joint. Real-time code over Raspbian and Arduino. Discrete model implementations.