Mauro Uribe

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WORK EXPERIENCE

Freelance FullStack Developer [React / Python]

Jan 2024 – Feb 2024 Bucaramanga, Colombia

 I developed a web application for a prominent company in Colombia to manage and visualize client information, incorporating user creation and permission management features. The data originates from an API of mechanical vibration meters or sensors.

I implemented a CRUD functionality using a Lambda function with API Gateway to interact with the data stored in DynamoDB. User authentication is facilitated through Auth0. The web application is constructed with React and utilizes the widely-used Material-UI component library (MUI). This project afforded me the opportunity to leverage my programming skills in both Backend and Frontend development.

Freelance Backend Developer

Nov 2023 – Dec 2023

Bogotá, Colombia

— During my professional tenure, I spearheaded the task of overseeing the reading and transmission of data from electrical meters to the frontend system. Leveraging Python, I crafted a sophisticated script adept at dynamically recognizing a multitude of meters linked via the Modbus RS485 protocol. This script adeptly harvested pertinent data from the meters and effortlessly relayed it to a specified URL endpoint through the HTTP POST method. Harnessing Python's robust capabilities, I optimized the workflow for data acquisition and transfer, thereby guaranteeing precision and dependability in furnishing vital metering insights to the frontend system.

Freelance Backend Developer

Aug 2023 – Sep 2023

Bogotá, Colombia

— In this project, I performed the reading and integration of various electrical sensors using Python, leveraging knowledge in Linux and AWS. Some of the sensors utilized MODBUS for communication, while others were read through MQTT, creating an MQTT broker on an EC2 instance and sending the data to a URL. Additionally, certain sensors communicated with a gateway via LORAWAN, and one sensor transmitted information via MQTT with credentials, leading to the decision to implement AWS IoT Core. Alongside this, a Lambda function was employed to trigger the transmission of information to the Front-End.

Support Engineer XACTUS

Mar 2021 – Present

Bucaramanga, Colombia

 I encountered challenges with a Czech traffic camera when it lost communication with our datalogger, resulting in significant data loss during manual reboots. To address this, I developed a Python script utilizing web scraping tools.
 This script continuously monitors communication status and automatically initiates system reboots, minimizing data loss to nearly negligible levels.

Additionally, I led the configuration and operation of an IoT Datalogger using RAK devices. Through Python, I crafted a desktop application featuring an intuitive, user-friendly data visualization dashboard adhering to best practices. Users could customize data formats and select preferred MQTT servers for seamless data transmission.

Furthermore, I delved into various sensor types, integrating them into our datalogger using diverse communication protocols such as MODBUS RTU, TCP/IP, HART, analog, and digital. Witnessing the seamless integration of acquired data culminating in intuitive web page visualization was immensely rewarding.

Software Development Engineer

Apr 2020 - Apr 2021

mouba.com

Bucaramanga, Colombia

— As a web developer, my role centered around optimizing and expanding client websites. I leveraged my expertise in React, CSS, SASS, HTML5, and React Bootstrap to enhance site performance and user experience. Collaborating closely with clients, I added requested features and proactively suggested value-adding functionalities. My job was all about making websites better, faster, and more functional, ensuring our clients' online success.

React / Python Freelance Developer

Jan 2020 - Apr 2020

Cusco, Perú

I developed a movie website following a design created by a UI/UX developer. In this project, I leveraged my React expertise, my proficiency in native CSS, and incorporated components from React Bootstrap. Additionally, I designed and implemented the API to fetch and deliver data to the frontend. To populate this API, I employed web scraping techniques with Python, extracting resources from other movie websites and storing the data locally on my PC.

EDUCATION

Unidades Tecnologicas de Santander Electromechanical Engineer CUM LAUDE

Bucaramanga, Santander

SKILLS

NextJs	Electron	mqtt	MaterialUI
React	Python	 WebScrapping 	DaisyUI
 React Native 	- SQL	UI/UX design	English (B2)
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JavaScript
 TypeScript
 Tkinter
 Tailwind
 Bootstrap
 In-depth knowledge of Linux and its entire ecosystem

COMMUNICATION PROTOCOLS

- I2C	- UART	– RS-232/RS-485	LoraWan
- SPI	Modbus	– LoRa	HART