ALYSON VALERIA CASTIBLANCO CASTAÑEDA

Mechatronics Engineer | Fullstack & Robotics | Automation & Web Development

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Professional Profile

Mechatronics Engineer with automation and robotics technical studies. Skilled in mechanical design, embedded systems, pneumatic systems, electronics (high and low power), and programming in Python, C, C++, Java, JavaScript, HTML, CSS. Experienced in web development using the MERN stack, frontend frameworks React and Vue, and databases MySQL, SQLite, MongoDB. Strong experience teaching mathematics, programming, and technology. Pragmatic, organized, creative, and committed to continuous learning, leadership, and teamwork.

Professional Experience

CAMINITO LAB – Frontend Developer | 02/2025 – Present

- Developed efficient, maintainable and reusable front-end code using HTML, CSS and JavaScript.
- Customized WordPress sites with Elementor, Astra, PHP, and plugin integration to meet company requirements.
- Design UX/UI Mockups in Figma attending design patterns in accordance with color theory and UX Fundamentals.
- Create customizable functionalities combining WordPress plugins like BuddyPress architecture and PHP code ensuring specific solutions for the company.
- Manage MySQL Database from WordPress Environment to extend the default functionalities of the plugins in accordance with the Company necessities.
- Implemented AJAX-based filtering system for dynamic post rendering from WordPress database.
- Integrated Django REST API endpoints with React frontend using Fetch API.
- Developed custom data flow between WordPress plugins and external APIs.
- Managed API authentication and data validation through request headers.

GENUINE SCHOOL – Computer Science Teacher | 02/2024 – Present

- Teach programming fundamentals, Python, HTML, CSS, JavaScript, responsive design, UI/UX, and Augmented Reality.
- Led STEM project team using WordPress Astra-Child theme and plugins (Ultimate Member, GamiPress, H5P).
- Implemented custom PHP code and managed MySQL database for project functionality.
- Developed custom API integration between H5P and GamiPress, implementing event detection and automated achievement system via API calls.

- Deliver virtual classes fully in English for international high school students.
- Design lessons integrating project-based learning and STEAM methodologies.

AVANCES EDUCATIVOS SANTO DOMINGO – ICT Main Teacher | 02/2023 – 11/2023

- Taught Office Suite (Excel, Word, PowerPoint) and programming in Scratch, mBlock, Python, HTML, CSS, JavaScript.
- Implemented robotics projects using Arduino UNO and 3D design with TinkerCAD.
- Classes fully taught in English using STEAM-based learning.

CETINCOL S.A.S. – Robotics Main Teacher | 01/2022 – 11/2022

- Taught robotics, embedded systems programming, mechanics, electronics, and energy systems.
- Developed projects using Arduino UNO and Halocode, programmed in C++ and mBlock.
- Applied project-based problem solving with TecPro system (certified).

Independent Fullstack Applications Developer – Fullstack Applications Consultant | 12/2021 – Present

- Developed frontend and backend web applications using HTML, CSS, JavaScript, React, Next.js, Vue, Node.js, Express, MongoDB.
- Managed databases including MySQL, SQLite, and MongoDB.
- Programmed in Python and Java and implemented end-to-end web projects.

IDRD – Ciclovía Guard | 02/2019 – 07/2021

- Managed logistics, administrative reporting, and community engagement.
- Led teams and coordinated senior students in recreational activities.

Education

Bachelor in Mechatronics Engineering – Universidad ECCI, Bogotá | 2015–2022

- Dissertation: Hardware-in-the-Loop platform for teaching control over low-cost embedded systems.
- Relevant Courses: Industrial & multivariable control, linear algebra, calculus, differential equations, embedded systems, mechanical design, programming.

General Education Degree in Software Development – Universidad Tecnológica de Pereira, Pereira | 2021

Associate Degree in Automation and Industrial Robotics – Universidad ECCI, Bogotá | 2015–2018

High School Degree – Instituto Tenerife, Bogotá | 2009–2014

Certifications & Other Studies

AUTOCAD 2D, SENA, Bogotá | 2016

OOP: Java and C++, SENA, Bogotá | 2017

Customer Service, SENA, Bogotá | 2021

Web Programming, Universidad de Antioquia, Bogotá | 2023

- Completed coursework including Next.js framework development, modern Java patterns using SpringBoot, and full-stack web applications.

Skills / Technologies

- Programming Languages: Python, Java, C++, JavaScript, HTML, CSS
- Operating Systems: Linux (Kali, Ubuntu), Windows
- Frameworks & Libraries: React, Vue, Express
- CSS & Styling: CSS3, Bootstrap, Responsive Design, CSS Modules (familiar).
- Databases: MySQL, SQLite, MongoDB
- API Development & Integration: RESTful API design using Express.js (CRUD operations), API consumption with Fetch API and async/await, JWT authentication implementation, WordPress REST API and AJAX integration, JSON data handling and third-party API integration.
- Frontend Tools & Best Practices: Responsive design and mobile-first development, Cross-browser compatibility and debugging, UI/UX design principles and Figma prototyping, Version control with Git and collaborative workflows, Agile methodologies and remote team collaboration.
- Tools & Software: Microsoft Office, AutoCAD 2D, Arduino IDE, TinkerCAD, mBlock
- Pedagogy & Teaching: Math, Technology & Innovation, Embedded Systems, STEAM Methodologies.

Languages

- Spanish – Native
- English – B2
- Portuguese – Basic

References

Available upon request