

Manuel Bolaños Valencia

Full-Stack Web Developer · Embedded Systems & IoT · AI Integration

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PROFESSIONAL SUMMARY

Full-stack web developer with over a decade of experience and 200+ delivered projects, now deliberately expanding into embedded systems and IoT. My core is the web stack — PHP, Laravel, WordPress, React and JavaScript — backed by solid experience leading teams as Scrum Master and Technical Lead under agile methodologies. I am building on that foundation with hands-on work in ESP32 firmware (C/C++), IoT devices, and the integration of AI agents and LLMs into real products.

The result is a rare hybrid profile: equally comfortable shipping a Laravel application, building a professional website, flashing firmware to a microcontroller, and wiring an LLM into the loop.

CORE COMPETENCIES

PHP · Laravel · WordPress · JavaScript · React · Vue · Angular · MySQL · PostgreSQL · REST APIs · GraphQL · Sass · Tailwind · Bootstrap · Shopify · VTEX · WooCommerce · ESP32 · Arduino · C · C++ · Embedded Firmware · IoT · SPI · I²C · LLM Integration · AI Agents · Prompt Engineering · Git · Webpack · Google Cloud · Scrum Master · Technical Leadership

WORK EXPERIENCE

Full Stack Developer

December 2022 – Present

TakeOff Media — Client: Content Pilot, Dallas, Texas, USA

- Build custom and headless WordPress websites end-to-end using WordPress, JS frameworks and React, owning both front-end development and back-end/database design.
- Develop bespoke WordPress themes and plugins tailored to client-specific requirements.
- Conduct website performance audits and optimizations, improving load times on content-heavy, image-rich sites.
- Collaborate in Scrum ceremonies with developers, tech leads and project managers to scope and deliver features.
- Provide ongoing support and troubleshooting for live websites, documenting solutions and tracking ticket resolution.

Stack: WordPress, Genesis Framework, PHP, JavaScript, React, HTML, CSS, Sass, MySQL, Webpack, SEO, Scrum

Operations Leader / Technical Leader

November 2020 – December 2022

Existaya.com — Cali, Colombia

- Led IT operations and a team of developers, defining processes, work schedules and performance goals.
- Acted as Technical Lead and Scrum Master, coordinating delivery across web and UX teams under agile methodologies.
- Reported progress and metrics to the COO and key stakeholders; managed vendor and client relationships.
- Contributed to business expansion initiatives (partnerships, acquisitions and corporate alliances).

Stack: WordPress, PHP, JavaScript, Angular, React, October CMS, Shopify, VTEX, WooCommerce, Sass, MySQL, REST

Project Manager / Technical Leader

January 2016 – November 2020

Existaya.com — Cali, Colombia

- Managed web projects and a 5-person development team from requirements through delivery.
- Coordinated Scrum ceremonies and ensured projects met scope, quality and deadlines.
- Built and maintained solutions across PHP/WordPress, React, Angular and e-commerce platforms (Shopify, VTEX, WooCommerce).

Stack: WordPress, PHP, JavaScript, Angular, React, Vue, October CMS, Shopify, VTEX, WooCommerce, Sass, MySQL, REST

Web Developer / UX Developer

February 2012 – January 2016

Existaya.com — Cali, Colombia

- Designed and built responsive websites and user interfaces (HTML5, CSS3, JavaScript, jQuery, WordPress).
- Integrated multimedia content, ran performance and UX testing, and collaborated with designers and stakeholders to deliver client projects.

Stack: WordPress, PHP, JavaScript, HTML, CSS, Angular, React, PhoneGap, IONIC

Web Developer

January 2011 – December 2011

EME — Cali, Colombia

- Developed and maintained websites using HTML5, CSS3, JavaScript, PHP and WordPress; built user interfaces and tested site performance.

Stack: WordPress, PHP, JavaScript, HTML, CSS

PROJECTS — EMBEDDED SYSTEMS, IOT & AI

4WD Exploration Rover (ESP32)

Personal build

- Designing and building a four-wheel-drive exploration rover around ESP32 microcontrollers, with a custom suspension system and a self-designed hexagonal PETG chassis.
- Implementing skid-steer motor control via BTS7960 drivers, a phased modular firmware architecture, and FPV video streaming.
- Working across mechanics, electronics and embedded firmware (C/C++) within a single project.

Embedded & IoT Experiments (ESP32)

Personal build

- Built WiFi-connected applications on ESP32 boards, including a live news ticker (NewsAPI + ArduinoJson) with category rotation on a TFT display.
- Interfaced TFT LCDs (ST7735) over SPI using the TFT_eSPI library; hands-on sensor integration and display driver troubleshooting.

AI-Assisted Development & LLM Integration

- Integrating LLMs and agent-style workflows into applications.
- Using AI-assisted tooling (Claude Code with MCP servers — GitHub, MySQL, filesystem, Playwright, Figma) to accelerate development.

TECHNICAL SKILLS

Backend: PHP, Laravel, WordPress, October CMS, MySQL, PostgreSQL, REST / SOAP / GraphQL APIs.

Front-end: JavaScript, React, Vue, Angular, HTML5, CSS3, Sass (BEM), Bootstrap 5, Tailwind.

E-commerce: Shopify, VTEX, WooCommerce.

Embedded & IoT: ESP32, Arduino, C, C++, firmware development, SPI / I²C, sensors & displays, motor drivers (BTS7960).

AI: LLM integration, AI agents, prompt engineering, AI-assisted development (Claude Code, MCP).

Tooling & DevOps: Git / Git Flow, Webpack, Google Cloud (GCP), Netlify, Linux / macOS / Windows.

Methodologies: Scrum (Scrum Master / Product Owner), Agile, technical leadership, project & team management.

Languages: Spanish (native), English (professional).

EDUCATION & CONTINUOUS LEARNING

Diploma, Project Management (PMI) ICESI University — Cali, Colombia	2016
Degree, Systems Technologist / Software Developer CECEP Technology University — Cali, Colombia	2012 – 2015
Diploma, Information Security / Project Management CECEP Technology University — Cali, Colombia	2015
Degree, Graphic & Web Design FADP Institute — Cali, Colombia	2008 – 2011
Online Coursework — Platzi & Udemy Laravel, WordPress, React, Angular, JavaScript (ES6), Git, MySQL, Shopify, VTEX	Ongoing
Continuous Learning — Embedded Systems & Robotics Self-directed path: CS50x, C / C++, Arduino, ESP32 / IoT — progressing toward ROS 2 and STM32.	Ongoing