

Carlos Ortiz Senior Full Stack Engineer

Designs, builds, and ships products end to end.

PROFILE

I design, build, and ship products end to end — from React, Vue.js, and Next.js interfaces to Node.js APIs, PostgreSQL databases, and production deployments. Over more than 4 years at Network Rail, I led the development of the corporate website and introduced a shared design system that standardized workflows across internal teams and external agencies. I have also founded ReactChallenges.com, a full-stack Next.js SaaS, and taken full ownership of products from architecture to launch.

EXPERIENCE

Founder & Lead Developer

June 2025 – Present

ReactChallenges.com · SaaS
Remote, Spain

Built an interactive platform that simulates real React technical interviews, where developers solve timed coding challenges in TypeScript with instant test-based feedback and a realistic development environment.

- Developed a full-stack Next.js application that allows users to solve React challenges under timed conditions, emulating real interview scenarios.
- Implemented a secure testing server that receives challenge code submissions, runs automated tests in isolation, and returns structured feedback to the client.
- Integrated the Monaco Editor with TypeScript support and a Vim keybinding layer for an authentic developer experience.
- Used Sandpack to dynamically render React components in-browser, enabling instant visual previews of user solutions.
- Designed and managed a PostgreSQL database using Drizzle ORM to store users, challenge attempts, results, and progress history.
- Created a custom API layer for handling submissions, timing, and test evaluation, ensuring performance and sandboxed isolation.
- Built a clean, responsive interface using Tailwind CSS and shadcn/ui components for consistency and accessibility across devices.
- Implemented secure authentication, session handling, and middleware for route protection and challenge access control.
- Optimized the build and deployment process for Vercel, including the integration of a dedicated runtime for test execution and challenge rendering.

CONTACT

-  Spain
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-  [carlosortiz.dev](#) (Full CV)

LANGUAGES

- Spanish - Native
- English - Professional

EDUCATION

Degree in Arquitectura Técnica
Universidad de Extremadura
1997 - 2002 · Cáceres, Spain

SIDE PROJECTS

Wod Academy
<https://coach-wod.vercel.app/>
A platform that helps people generate the best workout tailored to their needs.

Aplyin
<https://www.aplyin.com/>
A platform that helps people to track and apply for the best job opportunities tailored to their needs.

Play Soroban
<https://duffmancc.github.io/play-...>
A simple web app to practice the Japanese abacus soroban.

Lead Frontend Engineer

September 2024 – February 2025

FlowArchitect · Contractor
Remote, Spain

In FlowArchitect our mission is to empower developers and businesses by transforming complex AI workflows into seamless, open-source solutions. We simplify AI integration through accessible, flexible, and scalable tools, enabling innovation and productivity across applications of all sizes.

- Led the development of frontend architecture for AI-driven workflow applications.
- Defined the technical roadmap and architecture for the Design Workflow project.
- Designed and implemented scalable, maintainable, and reusable UI components using React.
- Defined workflows that could be translated into the Common Workflow Language.
- Collaborated with cross-functional teams to translate business requirements into intuitive and efficient user interfaces.
- Integrated APIs and AI tools seamlessly into frontend workflows to deliver intelligent application solutions.
- Led developers and provided guidance to team members, fostering a collaborative and high-performing engineering culture.
- Conducted code reviews to maintain high standards of quality and technical excellence.
- Implemented automated testing strategies to ensure the reliability and robustness of frontend components.

TECHNOLOGIES

Algolia

Alpine.js

Astro

BEM

Bedrock

Bootstrap

CSS3

Chromatic

Common Workflow Language

Composer

Docker

Drizzle

Express

Figma

Git

GitHub Actions

GitLab

GraphQL

Gulp

HTML5

JWT

Laravel

Next.js

Node

OAuth

OpenAI

Pinecone

Playwright

PostgreSQL

PrestaShop

React

Rete.js

Sage

Sandpack

Sass

Shadcn/ui

Storybook

Stripe

Tailwind CSS

TypeScript

Vercel

Vitest

Vue.js

Vuex

WP Engine

Webpack

WooCommerce

WordPress

a11y (WCAG)

cPanel

jQuery

Frontend Developer

August 2024 – September 2024

CoVi Analytics · Contractor
Remote, Spain

Covi Analytics is a data analytics company that empowers businesses with actionable insights into their operations and customer behavior.

- Analyzed the existing codebase of the web app to understand the functionality and architecture of the Vue.js application.
- Added TypeScript to the project to improve the codebase.
- Refactored the existing codebase to optimize performance and improve maintainability.

AI Engineer — WordPress Developer April 2023 – April 2024

MainGPT (formerly Urchin Labs) · Contractor
Remote, Spain

Started building a ChatGPT-powered customer service tool at Urchin Labs, integrating OpenAI and Pinecone vector database for WooCommerce sites. When the startup did not secure follow-on funding, I took full ownership of the project — completing development independently, documenting specifications, and launching it as MainGPT, an AI-powered chat assistant for online businesses with semantic search, contextual memory, and seamless WordPress integration.

- Designed and developed AI-driven chat interfaces using React and Vue.js, integrating OpenAI (ChatGPT) and Pinecone for semantic search, contextual memory, and tailored customer responses.
- Built a custom WordPress plugin for seamless AI assistant integration into existing business websites, including WooCommerce support.
- Built the core website using a headless WordPress setup with Next.js and GraphQL, delivering a modern, fast, and interactive user experience.
- Set up CI/CD pipelines with GitHub Actions to automate testing and deployment.
- Conducted extensive testing with Vitest and Playwright to ensure reliability, scalability, and performance across plugin and website.
- Took full ownership when the startup ceased operations — completed development independently, documented technical specifications, and launched the product as MainGPT.

WordPress Developer Jun 2022 – December 2022

Totally Group · Contractor
Remote, Spain

Totally Group is a digital agency that specializes in WordPress development. I worked on several projects for WordPress sites. Responsibilities included implementing new features, fixing existing bugs, coordinating with other developers and project managers, improving code quality, improving technology stacks, and delivering the needs of our clients.

- Developed custom WordPress themes and plugins for clients.
- Maintained and improved existing WordPress sites.

Lead Full Stack Web Developer

Feb 2018 – April 2022

Network Rail · Full time
Milton Keynes, United Kingdom

Network Rail is the owner and infrastructure manager of most of the railway network in Great Britain. As a public sector body, accessibility and compliance were core requirements. I worked on several projects for the company's internal systems, primarily leading the development of the new corporate website and providing guidance to other teams and agencies.

- Designed the architecture, development, and maintenance of the company's corporate website.
- Led the design and implementation of new features and functionality to enhance the user experience.
- Defined standards and tech stack in collaboration with other agencies and teams.
- Created custom Gutenberg blocks based on Advanced Custom Fields and Vue.js
- Developed a design system using Storybook to manage all frontend resources of the corporate website.
- Created single-page applications and other microsites based on Vue.js
- Monitored website performance and took appropriate action to ensure optimal performance.
- Ensured WCAG 2.1 AA accessibility compliance across the corporate website and all microsites, implementing keyboard navigation, screen reader support, and ARIA best practices within the design system.

Web Developer

Nov 2015 – Nov 2017

Klood Ltd · Full time
Milton Keynes, United Kingdom

Klood was a digital marketing agency based in Milton Keynes that specializes in inbound marketing.

- Met with clients to discuss website designs and functionality.
- Created custom plugins, themes, and functions for WordPress websites.
- Tested frontend code in multiple browsers to ensure cross-browser compatibility.
- Worked with multiple APIs and RESTful Services.
- Built reusable code and libraries for future use.
- Optimized pages for page speed using Google PageSpeed (API) for Apache to achieve higher rankings on Search Engines (SEM).
- Frontend development using the latest HTML5 and CSS3 techniques, enhanced by jQuery to enable optimum user experience throughout the websites.
- Worked in Agile methodology.

Web Developer

Oct 2013 – Oct 2015

Freelance · Full time
Canterbury (UK) and Cáceres (Spain)

I began my career as a web developer, working on various small projects for a range of clients.