Carlos Ortiz

Full Stack Developer

Contact

carlosor@gmail.com

Profile

Experienced Frontend Developer with a strong focus on React, Next.js, and modern UI development. With over 10 years of proven experience, I specialize in building interactive, scalable, and maintainable web applications that deliver outstanding developer and user experiences.

I have successfully led frontend and backend architecture projects, including the development of the Digital, Social Media, and Film department at Network Rail, where I introduced a design system and established a scalable architecture that streamlined collaboration and consistency across other agencies.

Previously, I served as Lead Frontend Engineer at FlowArchitect and MainGPT, where I spearheaded the development of AI-powered workflow applications using React and related technologies.

I am now fully dedicated to building ReactChallenges.com — an interactive platform that helps developers practice React through timed coding challenges that simulate real interview conditions. The platform provides a TypeScript-based editor, real-time test execution, and an isolated runtime to evaluate solutions just like in a professional environment.

While my current focus is on frontend and full-stack development with React and Next.js, I bring extensive experience in backend systems — including API design and database architecture — using technologies such as Laravel, Drizzle, PostgreSQL, and Node.js.

Experience

Founder & Lead Developer

ReactChallenges.com - Independent project

June 2025 - Present

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.

Next.js · React · TypeScript · Tailwind CSS · Vitest · Sandpack · Stripe · PostgreSQL · Vercel

AI Engineer

MainGPT - Full time

February 2025 - Present

Full remote, Spain

Leading the development of AI-powered chat assistants for online businesses, combining frontend innovation with advanced AI and vector search technologies to deliver personalized, scalable customer support solutions.

- Designing and developing AI-driven chat interfaces using React and Vue.js to improve user engagement and customer support efficiency.
- Integrating vector databases (e.g., Pinecone) to enable semantic search and contextual memory within chat assistants.
- Building custom WordPress plugin to allow seamless AI assistant integration into existing business websites.
- Leveraging the OpenAI API (ChatGPT) to deliver tailored, context-aware responses based on user input and stored business knowledge.

OpenAI · Pinecone · React · Vue.js · Next.js · TypeScript · WordPress · WooCommerce

Lead Frontend Engineer

FlowArchitect - Contractor part time

September 2024 - February 2025 | 6 months
Full 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.

(Common Workflow Language) (Rete.js) (React) (Astro) (Tailwind CSS) (Vitest) (Playwright)

Frontend Developer

[CoVi Analytics](#) - Contractor part time

August 2024 - September 2024 | 2 months
Full 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 application.
- Added TypeScript to the project to improve the codebase.
- Refactored the existing codebase to optimize performance and improve maintainability.

(Vue.js) (TypeScript) (Tailwind CSS)

Full Stack Developer

[Wod Academy](#) - Personal project

Feb 2024 - Present
Full remote, Spain

Personal project to create a platform that helps people generate the best workout tailored to their needs.

- Designed the architecture, development, and maintenance of the platform.
- Defined standards and tech stack, utilizing a Laravel API and a Preact frontend built on Astro
- Tested frontend code across multiple browsers to ensure cross-browser compatibility using Vitest and Playwright.
- Tested backend code to ensure the API's reliability and robustness with Pest.
- Managed servers and databases to ensure optimal performance.

(Preact) (TypeScript) (Astro) (Tailwind CSS) (Vitest) (Playwright) (Laravel) (Pest)

AI Engineer - WordPress Developer

Urchin Labs - Contractor part time

April 2023 - Feb 2024 | 10 months
Full remote, Spain

Urchin Labs was a startup focused on developing a ChatGPT-powered tool to improve customer service, specifically tailored for WooCommerce sites. Despite the project showing early potential, the startup did not move to the next stage of funding, and operations ceased before the product could be fully launched. However, I took ownership of the project, completing the development independently to ensure it was a fully functional solution. While it was never published on the official WordPress repository, the plugin is publicly available for manual installation on MainGPT.chat.

- Designed the architecture and functionality of the plugin, integrating ChatGPT and Pinecone vector database for efficient data retrieval.
- Integrated the plugin with the site's existing database, ensuring data security and privacy.
- Developed a user-friendly interface for clients to interact with the Chatbot and receive relevant answers.
- Conducted extensive testing to ensure the plugin's reliability, scalability, and performance.
- Documented the plugin's technical specifications, including installation and usage instructions, for future reference.
- Built the core website using a headless WordPress setup with Next.js to provide a modern, fast, and interactive user experience.

WordPress · Pinecone · ChatGPT · Docker · Vue.js · React · Next.js · Tailwind CSS · GraphQL · WooCommerce · Vitest · Playwright · Figma · GitHub Actions

WordPress Developer

Totally Group - Contractor full time

Jun 2022 - December 2022 | 7 months
Full 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.
- Maintened and improved existing WordPress sites.

WordPress · jQuery · Webpack · Sass · BEM · Git · Sage · Bedrock · Docker · GitLab

Some Projects
- Start Up Loans
- txOne networks
- Business Disability Forum
- Save the rhino
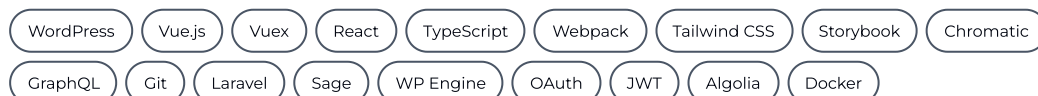
Full Stack Web Developer

Network Rail - Full time

Feb 2018 - April 2022 | 4 years and 3 months
Milton Keynes, United Kingdom

Network Rail is the owner and infrastructure manager of most of the railway network in Great Britain. 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.

WordPress · Vue.js · Vuex · React · TypeScript · Webpack · Tailwind CSS · Storybook · Chromatic · GraphQL · Git · Laravel · Sage · WP Engine · OAuth · JWT · Algolia · Docker

Some Projects
- Network Rail corporate website
- Careers Search
- Sustainability at Network Rail

Web Developer

[Klood Ltd](#) - Full time

Nov 2015 - Nov 2017 | 2 years
Milton Keynes, United Kingdom

Klood is 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.

WordPress · jQuery · Gulp · Composer · Git · Docker · Bootstrap · Sage · Laravel · cPanel · WooCommerce

Some Projects

- [Volkswagen Financial Services](#)
- [Peach Pubs](#)

Web Developer

Freelance - Full time

Oct 2013 - Oct 2015 | 2 years
Canterbury (UK) and Cáceres (Spain)

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

WordPress · PrestaShop · jQuery · HTML5 · CSS3

Education

Arquitectura Técnica

[Universidad de Extremadura](#)
1998-2002
Cáceres, Extremadura, Spain