

# Mario R. Ayala

Senior Software Engineer with 20+ years of experience, including military service, specializing in full-stack web development with .NET Core. Recent focus on Next.js, TypeScript, and Solidity smart contracts, while expanding expertise in React for component-based architecture. Proven track record of delivering enterprise-scale applications across industries.

## EXPERIENCE

### MPA Consultants, Las Marías, Puerto Rico — *Digital Transformation Program Designer*

MAYO 2025 - JULIO 2025

- Developed a 150-hour intensive program that transforms displaced adults into digital professionals.
- My pedagogical innovation used the OSI network model as an educational framework, integrating AI, blockchain, and Microsoft tools.
- The program resulted in each student having an executive CV, a business plan, and an entrepreneurial digital presence, fostering local economic development and a community multiplier effect.

### MPA Consultants, Santurce, Puerto Rico — *Leadership Instructor*

MARCH 2025 - May 2025

- I designed and taught a 70-hour intensive course on professional behavior and interviewing skills, enriching the original curriculum with modules on AI for job search.
- Created comprehensive course material including presentations, assessments and practical exercises that promoted active discussion and student participation.
- I implemented methodology based on progressive sequencing of knowledge, achieving a course completion rate above 90%.

### Yukayeke Playa, Añasco, PR— *Digital Transformation Director*

MARCH 2024 - DECEMBER 2024

- Led comprehensive digital modernization initiatives, architecting and implementing a multilingual (ES/EN) web platform using Next.js 14, TypeScript, and Tailwind CSS, resulting in enhanced user experience and improved online presence.
- Designed and currently implementing (as external consultant) a proprietary booking system architecture utilizing Rust and modern web technologies to streamline operations and enhance guest engagement.
- Spearheaded migration from legacy platform (Squarespace) to modern tech stack hosted on Vercel, implementing internationalization and responsive design principles.

Mayagüez, PR  
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## FRONT-END

Next.js/React

TS/JavaScript

Tailwind CSS

Blazor

## BACKEND

.NET Core/C#

ASP.NET

Node.js

MVC/REST

## BLOCKCHAIN

Solidity

ERC Standards

Polygon

## DATABASES

MS SQL Server

PostgreSQL

## CLOUD & DEVOPS

Azure Devops

Github

Vercel

Twillio

## LANGUAGES

Spanish (Native)

English  
(Professional)

## **WOTEC, Las Marías, PR — Educational Technology Specialist**

APRIL 2024 - JUL 2024

- Designed and implemented a 400-hour technical literacy program transforming novices into digitally competent professionals.
- Developed a comprehensive curriculum integrating AI tools, productivity software, and collaboration platforms achieving 85% completion rate.
- Created custom learning modules for practical technology applications, including data analysis and automated workflows..
- Mentored diverse learners in essential digital competencies including cloud collaboration and web technologies.

American Sign  
Language  
(Conversational)

## **Mayagüez, PR — Independent Technology Consultant**

SEPTEMBER 2021 - Present

- Created and continues maintaining the website for Café Papamín in San Sebastian. (<https://CaféPapamín.com>)
- Developed and deployed blockchain applications including an NFT marketplace prototype using Solidity and React.
- Conducted technology workshops educating professionals and students on blockchain fundamentals and smart contract development.
- Built custom web applications for small businesses using [Next.js](#) and TypeScript, implementing modern UI/UX practices.

## **Disney Parks, Experiences and Products, Orlando, FL— Principal Software Engineer / Data Engineering Specialist**

NOVEMBER 2015 - SEPTEMBER 2021

- Led enterprise-wide technical initiatives as principal software architect and data engineering specialist at Disney Parks, serving as the sole software engineer for critical business intelligence projects.
- Architected and delivered an enterprise-scale Business Intelligence Portal unifying SharePoint, Tableau, and MS SQL data sources, implementing an MVC/REST architecture that enabled role-based access authenticating with NTLM for executives across Disney's global operations.
- Pioneered a cross-platform mobile application with Xamarin utilizing geolocation and barcode scanning technologies, integrating with Tableau dashboards for real-time store analytics and product information retrieval.
- Designed and implemented a comprehensive project portfolio management solution featuring custom Gantt visualizations for financial quarter comparison and gap analysis.

## **AVM L.P., Boca Raton, FL— Senior .NET Developer**

APRIL 2011 - JUNE 2012

- Architected and implemented mission-critical financial reporting systems for derivatives trading, achieving 100% accuracy in OTC transaction validation through robust real-time data verification.
- Designed and developed secure data export frameworks for OTC and non-OTC derivative products, ensuring compliance with industry standards while

maintaining data integrity.

- Led the re-architecture of middle-tier systems in ASP.NET and C# for swap-related financial instruments, implementing test-driven development practices with the Moq framework that significantly enhanced platform reliability.

### **ABB Concise, Coral Springs, FL— Senior Software Developer**

JUNE 2007 - FEBRUARY 2011

- Developed and maintained ASP.NET e-commerce applications for eye care using C#, SQL Server, Progress DB, and Visual Studio 2010
- Implemented WCF Services, AJAX controls with JQuery and JavaScript for database and client-side communication
- Created new e-commerce features like tiered pricing, coupons, shipping rebates, and auto reordering

### **Office Depot, Delray Beach, FL— Senior Technical Lead / Developer III**

NOVEMBER 1998 - JANUARY 2005

Enterprise Systems Architecture:

- Merchandise Financial Planning
  - Led architecture and implementation of Oracle Retail MFP platform, integrating predictive analytics with enterprise financial systems
  - Engineered automated data integration framework connecting disparate enterprise databases (SQL Server, Oracle, DB2, Teradata)
  - Developed real-time UNIX process monitoring system utilizing early AJAX implementation
- Merchandise Financial Planning
  - Led architecture of Oracle Retail MFP platform, integrating with SQL Server, Oracle, DB2, and Teradata
  - Developed real-time monitoring system with UNIX shell scripting and early AJAX implementation
  - Managed Retek Predictive Application Server on UNIX environments Customer Experience Solutions
- Computer Telephony Integration
  - Architected ASP-based integration between Rockwell telephony systems and intranet applications
  - Implemented Genesys libraries in Visual Basic 6.0 for CTI functionality
  - Developed XML/XSLT document management system for enterprise communications
- Order Management Platform
  - Led full lifecycle development of XML-based order entry intranet application
  - Designed COM+/ActiveX shopping cart with JavaScript frontend
  - Implemented B2B communication framework with ASP and Visual Basic Global E-commerce
- International Platform (Viking Direct)
  - Served as Technical Consultant for UK e-commerce implementation
  - Engineered integration between frontend ASP applications and AS/400 business rules
  - Designed distributed Visual Basic 6.0 middleware for cross-border operations

**United States Navy, East Coast, US— *Information Systems Specialist (RM2/E5)***

NOVEMBER 1987 - MARCH 1993

- Demonstrated early programming aptitude by self-teaching dBase IV and developing an automated casualty tracking system that streamlined maintenance operations fleet-wide.
- Implemented mission-critical information security protocols and policies for standalone computer systems during Operation Desert Shield/Desert Storm.
- Received commendation for initiative in modernizing manual processes through technology solutions, resulting in significant operational efficiency improvements.

**EDUCATION**

**Florida International University, Miami, FL — *Courses in Computer Science***

1994 - 1998

Dean List

**New York Institute of Technology, Online — *Bachelor in Computer Science***

2006 - 2007

Cum Laude

**Ellis University, Online — *Master in Computer Science***

2009 - 2010

Magna Cum Laude

**VOLUNTEER**

**Florida Interscholastic Cycling League, FL — *Founding Member***

<http://FloridaMTB.org>