

ATILIO JOSE VILLALBA GIUBI

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PROFILE

I'm Atilio Villalba, a software engineer with over 6 years of experience building secure, scalable systems across fintech, automation, and CRM. I focus on backend development with Java, Node.js, and C#, but I also enjoy working with React on the frontend. I lead projects at fintech.works, solving real-world problems with clean, reliable code. I'm always curious to explore new technologies and take on fresh challenges. Outside of work, I collect vinyl records, enjoy live music, travel often, and experiment with game development.

EDUCATION

Universidad Católica Nuestra Señora de la Asunción
Computer Science Engineer

Asunción, Paraguay
2013 – 2019

EXPERIENCE

Full-Stack Engineer & Architect
fintech.works

Jun. 2024 – Present
Hybrid – Asunción, Paraguay

- Part of the **Integration Team**, leading the modernization of legacy APIs written in multiple languages into standardized, maintainable services aligned with company-wide architectural standards.
- Studied and applied **Clean Architecture** and **Hexagonal Architecture** principles across **.NET** and **Java** ecosystems to support cross-team consistency.
- Designed and implemented a **Java Clean Architecture project template** (API, Application, Domain layers), aligned with internal **logging**, **security**, and observability standards, now used as the base for new Java APIs across the team.
- Modernized legacy client APIs using the Java template, improving structure, extensibility, and functionality while preserving backward compatibility where required.
- Refactored and extended a legacy **Amazon Cognito** integration API responsible for user lifecycle management, including group management, permission handling, password updates, and user impersonation.
- Implemented backend logic to manage a custom user attribute used to enforce authorization rules and drive role-based data visibility in frontend applications.
- Modernized additional APIs based on an existing **.NET Clean Architecture** template, integrating with on-premise **COBOL** systems via a proprietary client library.
- Implemented response parsing and data-mapping layers for COBOL services according to strict client specifications and legacy data formats.
- Owned **AWS** configuration for modernized services, including deployments, environment variable management for **ECS**, and promotion across multiple environments.
- Performed production troubleshooting and hotfixes using **CloudWatch** logs and metrics, debugging distributed services to restore system stability.
- Coordinated directly with client technical teams, providing estimates, architectural explanations, and delivery updates for ongoing modernization efforts.

Back-End Engineer
Wind River

Sep. 2021 – Jun. 2024
Remote – United States

- Worked on the **Test Automation Framework (TAF)**, a distributed platform for executing automated tests across heterogeneous environments (bare metal, VMs, containers) and orchestrating complex test workflows with result reporting.
- Developed backend services using **Node.js**, **Express**, and **TypeScript**, following a microservice architecture with an **API Gateway** and asynchronous communication via **Apache Kafka**.
- Designed and implemented the **data source microservice**, a core component responsible for dynamically selecting the correct data source and routing requests transparently across **relational databases**, **NoSQL stores**, and **external APIs**.
- Built a factory-based **data access layer** with source-specific mappings, enabling consistent CRUD operations, extensibility, and isolation of data-source logic across services.
- Implemented backend logic for test scheduling, workflow execution, result analysis, report generation, and system-level calculations.

- Wrote and maintained unit tests with **Mocha**, **Chai**, and **Sinon**, sustaining **80%+ code coverage** and enforcing maintainable, well-documented code.
- Collaborated in a fully remote **Agile SCRUM** team, participating in daily standups, backlog grooming, sprint planning, demos, and retrospectives with direct client interaction.
- Contributed to internal documentation and onboarding guides using **Confluence**, improving knowledge transfer and ramp-up time for new engineers.

Full-Stack Engineer

Microtech SA

Mar. 2020 – Aug. 2021
Hybrid – Asunción, Paraguay

- Started as a data and business analyst, developing **ETL** processes and data warehouse queries using **SQL**, **T-SQL**, and **C#** to support reporting and operational analysis.
- Designed and implemented a high-availability data synchronization module using **Node.js**, **RabbitMQ**, and **PM2** to reconcile data between **Microsoft Dynamics 365** and on-premise CRM systems.
- Developed multiple **Express.js** RESTful services hosted on **Windows-based servers**, consumed by different CRM platforms.
- Built an **API Gateway** to secure backend services and manage access control between distributed systems.
- Implemented backend integrations to expose on-premise **PHP** system data inside **Dynamics 365**, including custom views and data mappings.
- Developed **JavaScript** customizations and scripts for **Dynamics 365** to extend CRM workflows and user interfaces.
- Performed database analysis and schema design, supporting project planning and long-term data scalability.
- Produced API documentation using **Swagger** and **OpenAPI 3.0** to support internal and client integrations.
- Collaborated directly with stakeholders to define business logic, technical requirements, and delivery timelines.
- Provided technical support and maintenance for production systems used by enterprise clients.

Full-Stack Developer

Fiweex

Apr. 2019 – Jan. 2020
On-site – Asunción, Paraguay

- Contributed to the core web platform for WiFi-based customer acquisition and analytics, enabling restaurants and retail businesses to collect user data and run targeted marketing campaigns.
- Designed and implemented an automated monthly analytics reporting module that generated **PDF** reports from platform data and delivered them to clients via email.
- Built complex analytical and competitor-ranking queries using **MySQL** to compare client performance against market benchmarks.
- Developed and maintained backoffice features using **PHP**, **MySQL**, **jQuery**, **HTML**, and **CSS**, including customer visualization and campaign performance dashboards.
- Implemented authentication and password recovery flows, and extended the database schema to support new business modules.
- Collaborated using **Git** and provided technical support for production issues affecting client-facing features.

Thesis Worker (Full-Stack Developer)

Software Natura (now MentorMate)

Mar. 2018 – Mar. 2019
On-site – Asunción, Paraguay

- Researched and designed an offline-first livestock traceability system for areas with limited connectivity, as part of final Computer Science thesis work.
- Designed a multi-database architecture combining **PouchDB/CouchDB** for offline document storage and **PostgreSQL** as the system of record to ensure compatibility with existing platforms.
- Developed synchronization and conflict-resolution algorithms in **Node.js** and **Express**, based on column-level flags and last-update timestamps to ensure deterministic data reconciliation.
- Built a mobile data-capture application using **React Native**, enabling offline operation and deferred synchronization with backend services.
- Implemented a web application in **React** for data visualization and management, backed by containerized services using **Docker**.
- Authored a full technical thesis documenting livestock productivity data requirements, database synchronization strategies, trade-offs, and architectural decisions.
- Worked under Agile Scrum methodology with version control using **Git**.

COURSES AND CERTIFICATIONS

Microsoft Certified: Azure Fundamentals
Udemy: The Complete Guide to Becoming a Software Architect
Academind: Docker and Kubernetes: The Practical Guide
Udemy: Understanding Typescript
EF Standard English Test: EF SET English Certificate

TECHNICAL SKILLS

Languages: Java, TypeScript, C#, Python, SQL
Frontend: React.js, Redux, Hooks, Ant Design, HTML5, CSS3, jQuery
Backend: Spring Boot, Node.js, Express.js, .NET, Kafka, RabbitMQ
Architecture: Clean Architecture, Hexagonal Architecture, Microservices
Cloud: AWS (ECS, Lambda, CloudWatch), Azure, Docker
Databases: MySQL, PostgreSQL, SQL Server, DynamoDB, MongoDB, OpenSearch
DevOps: Git, Jenkins, CI/CD
Testing: Mocha, Chai, Sinon, JUnit

LANGUAGES

Spanish (Native) English (Advanced) French (Basic)