

RAFAEL SAN VIDAL

Senior Software Developer | AI-Powered Coding Specialist | Healthcare Expert

25+ YEARS PROFESSIONAL EXPERIENCE

 sanvidal1@gmail.com  [linkedin.com/in/rsanvidal](https://www.linkedin.com/in/rsanvidal)  github.com/rsvidal  Madrid, Spain (EU)  rsvidal.github.io

PROFESSIONAL PROFILE

Senior Software Developer with 25+ years of professional experience in enterprise solutions development. Journey started at age 13 with first 8-bit personal computers, writing first BASIC programs. Specialized in healthcare sector for 19+ years at Becton Dickinson. Full-stack developer expert in .NET, Java, Spring Boot, Angular, React. Pioneer in AI-assisted development workflows.

Current Focus (2025): Building enterprise applications with .NET 9 and Java 21. Embracing AI-assisted development with Cursor, Claude Code and Gemini CLI. Creating cross-platform solutions implementing Clean Architecture and DDD patterns. **Vibe Coding Philosophy:** Leveraging AI to focus on problem-solving and architecture while accelerating implementation without sacrificing code quality.

Key Highlights: ✓ 25+ years professional experience ✓ Healthcare domain expert (BD Company since 2005 - 19+ years) ✓ Full-stack developer (.NET, Java, Spring Boot, Angular, React) ✓ AI-powered workflow enthusiast ✓ Enterprise architectures: Clean Architecture, DDD, CQRS, Microservices ✓ Multi-database expertise (SQL Server, Oracle, MySQL, DB2, PostgreSQL, MongoDB)

PROFESSIONAL EXPERIENCE

Senior Software Developer - Healthcare Solutions

Nov 2005 - Present (19+ years)

Becton Dickinson and Company

Key Responsibilities

- Full-stack development of healthcare applications (EMEA region)
- Architecture design, UI/UX, security and database management
- CI/CD pipeline implementation with Azure DevOps
- Team mentoring and code review practices

Healthcare Domain Expertise (19+ years)

- HL7/HL7-FHIR protocol implementation for clinical data exchange
- ASTM standards for laboratory automation
- RFID integration in hospital environments for equipment and sample tracking
- Real-time data processing for critical systems
- Mirth Connect healthcare integration platform

Quality & Security Standards

- Fortify OnDemand - Static Application Security Testing (SAST)
- SonarQube - Code quality and security analysis
- OWASP Top 10 compliance and vulnerability assessment
- Healthcare security standards (HIPAA, GDPR compliance)
- Penetration testing and security audits
- Code coverage and automated testing pipelines

Multi-Database Expertise

- Multi-motor support: MySQL, MariaDB, SQL Server, Oracle, IBM DB2
- Database migrations with Flyway
- Cross-database compatibility and optimization

Tech Stack: .NET 9, C# 13, Java 21, Spring Boot, Spring Data JPA, React, Angular, TypeScript, Blazor, Thymeleaf, SQL Server, MySQL, Oracle, IBM DB2, MariaDB, Azure DevOps, Docker, Git, Jira, Spring Security, SignalR, WebSockets, Socket.io, WPF, Uno Platform, RCP/RAP

Software Developer (Part-time) - Startup

Nov 2014 - Dec 2015

Omnibona S.L.

Multi-platform health & fitness application with gamification. Design and development of multi-platform application about healthy habits. Nutrition and exercises in game mode.

Tech: ASP.NET MVC, Razor, Entity Framework, LINQ, HTML5, CSS3, Bootstrap, JavaScript, jQuery, Microsoft Azure

Software Developer

Aug 2003 - Oct 2005

Oesia

Software development in Healthcare, Public Services and Telecommunications sectors. Key Customers: CMT, Telefónica Móviles España, Hewlett-Packard, Siemens, Public Administrations.

Tech: .NET, C#, Oracle, Informix Dynamic Server, SQL Server, MySQL

Technical Support

Aug 2003 - Sep 2003

Easynet España S.A.

Technical support and customer service

SAP Key Business | Business Analyst

Jan 2002 - Jul 2003

L'Oréal Spain

SAP R/3 Project Leadership

- Business Key for SAP R/3 implementation (FI, CO, MM modules)
- Project planning, design and implementation of SAP modules
- Reports development and ABAP IV programming
- Business requirements analysis and stakeholder management

Historical Projects

- 2000 and Euro Projects - Y2K compliance and Euro currency conversion
- Management Applications - Accounts and Purchasing systems
- AS/400 and IBM AIX systems integrations

Tech: SAP R/3, ABAP IV, C++, RPG, 4GL, AS/400, IBM AIX, Oracle, Ingres

Software Developer

Jan 1998 - Jun 1998

Ministerio de Asuntos Exteriores (Ministry of Foreign Affairs)

Design and development of application to manage diplomatic passports. Passports management project development.

Tech: 4GL Language, Ingres Database

COMPLETE TECHNOLOGY STACK - 25+ YEARS EXPERIENCE

Backend/Languages .NET 9 / C# 13 Java 21 Spring Boot 3.x ASP.NET Core 9 Node.js / Express Python / Django PHP / Laravel Erlang / Haskell Clean Architecture Domain-Driven Design CQRS Pattern Repository Pattern	Frontend React Angular TypeScript Blazor WebAssembly WPF / WinUI Uno Platform HTML5 / CSS3 Element UI (Vue.js) JavaScript / jQuery Bootstrap Razor Thymeleaf	Mobile Kotlin (Android) Android Studio Xamarin .NET MAUI Mobile UI Design	Databases SQL Server MySQL / MariaDB SQLite PostgreSQL Oracle IBM DB2 MongoDB Redis Cassandra InterSystems Caché Informix Dynamic Server CA Ingres Multi-DB Support	DevOps/Cloud Azure DevOps Microsoft Azure AWS Google Cloud Platform Docker Kubernetes Git / GitHub Jenkins SonarQube GitHub Actions Jira / Confluence Subversion / CVS Terraform / Ansible
AI Tools (2024-2025) Cursor Pro Claude Code (CLI) Gemini CLI GitHub Copilot Azure OpenAI Services Semantic Kernel NotebookLM LangChain OpenAI API	Spring Ecosystem Spring Data JPA Spring Security + OAuth2 Spring MVC / WebFlux Thymeleaf Spring AOP Spring Cloud Eureka / Hystrix Flyway Migrations Spring Boot DevTools Spring Validation Thymeleaf Security Ext. Apache Kafka	Java Ecosystem Hibernate / JPA Criteria API Maven / Gradle JUnit / Mockito Apache CXF / Jersey HikariCP Java 8 Lambda Functional Programming	.NET Ecosystem Entity Framework Core Dapper / LINQ NLog / Serilog AutoMapper Polly.NET SignalR (Real-time) xUnit / NUnit / Moq Hangfire FluentValidation MailKit / RabbitMQ Minimal APIs Swagger/OpenAPI	Testing Advanced Selenium WebDriver Playwright Jest / Testing Library Mockito Postman / Insomnia TDD / BDD / ATDD Unit Testing Integration Testing Code Coverage Automated Testing
Cloud Functions Azure Functions AWS Lambda Serverless Computing Function Apps	Quality & Security Fortify OnDemand (SAST) SonarQube OWASP Top 10 HIPAA / GDPR Penetration Testing Security Audits Vulnerability Assessment	Big Data/Analytics IBM Cognos Talend ETL Apache Hadoop Elasticsearch Prometheus Grafana Data Visualization	Enterprise Systems SAP R/3 (FI, CO, MM) ABAP IV Programming AS/400 Systems IBM AIX Business Analysis Project Management	ML/Data Science Python ML Scikit-learn Pandas / NumPy TensorFlow / Keras Neural Networks Jupyter Matplotlib / Seaborn Statistical Analysis
Specialized Tech Blockchain / Web3 Solidity / Ethereum Unity 3D (C#) Game Development Computer Vision Abbyy Technologies Infaimon CVB WordPress / Joomla OCR / Barcode TWAIN / WIA	IoT Arduino Raspberry Pi Netduino Bluetooth HC-05 Ethernet Shield CoAP Protocol aREST API Mobile + IoT Integration	Historical Languages ABAP IV (SAP) RPG (AS/400) 4GL (Ingres) COBOL Pascal C++ BASIC Assembly (8-bit)	Dev Tools Visual Studio Pro VS Code Cursor Eclipse IntelliJ IDEA IBM Rational Suite Android Studio	Real-time/Messaging SignalR WebSockets Socket.io STOMP.js RabbitMQ Apache Kafka Event-Driven Architecture

METHODOLOGIES & SOFTWARE ENGINEERING PRINCIPLES

Agile Methodologies <ul style="list-style-type: none">Scrum (Sprint Planning, Daily Standups, Retrospectives)Kanban (Continuous Flow, WIP limits)XP (Extreme Programming)Lean Software Development	Architecture Patterns <ul style="list-style-type: none">Clean ArchitectureDomain-Driven Design (DDD)CQRS (Command Query Responsibility Segregation)Repository PatternMicroservices ArchitectureEvent-Driven ArchitectureSOA (Service Oriented Architecture)	SOLID Principles <ul style="list-style-type: none">Single Responsibility PrincipleOpen/Closed PrincipleLiskov Substitution PrincipleInterface Segregation PrincipleDependency Inversion Principle
Testing Methodologies <ul style="list-style-type: none">TDD (Test-Driven Development)BDD (Behavior-Driven Development)ATDD (Acceptance Test-Driven Development)Unit Testing / Integration Testing	Design Patterns (GoF) <ul style="list-style-type: none">Creational: Factory, Builder, SingletonStructural: Adapter, Decorator, FacadeBehavioral: Observer, Strategy, Command	Code Quality <ul style="list-style-type: none">Clean Code PrinciplesCode Review PracticesRefactoring TechniquesTechnical Debt ManagementDocumentation Standards

FEATURED PROFESSIONAL PROJECTS (Becton Dickinson - Healthcare)

BD Support System - Hospital Inventory Management

Clean Architecture + DDD enterprise platform

- Hospital equipment tracking and location management
- 29 architectural patterns implemented
- Multi-database support (SQLite, SQL Server, MySQL)
- JWT authentication with RBAC
- 115+ comprehensive tests
- Complete technical documentation (30+ docs)

.NET 9, Clean Architecture, DDD, CQRS, Multi-DB, JWT, RBAC, Entity Framework, Minimal APIs, Swagger

ScanBatch OCR - Document Processing System

Batch scanning with OCR and barcode recognition

- Abbyy FineReader integration
- Barcode recognition library
- TWAIN scanner driver support
- Windows Service daemon for background processing

WPF, C#, Abbyy OCR, TWAIN, WIA, Windows Services

DB Transfer Client - Database Migration Tool

Cross-database data transfer utility

- Transfer data between different database engines
- Support for SQL Server, Oracle, MySQL, DB2
- ETL processes and data transformation

.NET, C#, Multi-DB, ETL

BD RFID System - Healthcare RFID Management

Full-stack enterprise platform for hospital sample tracking

- Tag Manage: RFID tag management interface
- Tag Backend: REST API with multi-database support
- SSTSDaemon: Background service for sample tracking
- Tag Shipping: PHP/Laravel shipping module
- Real-time dashboard with WebSockets (STOMP.js)
- JWT authentication & session management
- WinUI 3 desktop application
- RFID reader integration (CAEN, Impinj)
- Distributed caching & high availability

Spring Boot, Thymeleaf, Angular, TypeScript, .NET, C#, PHP, Laravel, Node.js, Express, Oracle, SQL Server, IBM DB2, MySQL, WebSockets, RFID, DDD, REST API, JWT, Swagger

BD Components - Cross-Platform Component Library

Reusable UI components with Uno Platform

- Single codebase: Android, iOS, Web, Windows
- XAML-based declarative UI
- Custom controls library

Uno Platform, .NET, XAML, Android, iOS, WebAssembly, Windows

LEARNING & EXPERIMENTAL PROJECTS

AI/ML Projects: OpenAI API, Azure AI, LangChain, prompt engineering, Azure AI integration, Semantic Kernel, LLM evaluation framework

DevOps Practice: Docker, Kubernetes, AWS, Azure pipelines, Terraform, cloud infrastructure

Microservices Netflix: Spring Cloud, Eureka, Hystrix implementation

React Full Stack: Complete React + Node.js + MongoDB, Redux, TypeScript

Testing Advanced: Playwright, Jest, Testing Library, Selenium automation

Cloud Functions: Azure Functions, AWS Lambda, serverless computing

Kotlin Android: Native Android development, mobile UI

Arduino IoT: Arduino + Bluetooth + Android, Ethernet Shield, CoAP protocol, aREST API

Mobile IoT: Xamarin + Arduino integration, Android + Bluetooth communication

Blockchain/Web3: Solidity, Ethereum smart contracts

Game Development: Unity 3D with C#

Machine Learning: Python ML, TensorFlow, Scikit-learn, Pandas, NumPy, data analysis

SOFT SKILLS

- Team Leadership & Mentoring Junior Developers
 - Code Review & Quality Assurance
 - Technical Documentation
- Stakeholder Communication
 - Problem Solving & Analytical Thinking
 - Agile/Scrum Ceremonies
- Project Management
 - Business Requirements Analysis
 - Continuous Learning & Adaptability

TRAINING & CONTINUOUS EDUCATION (80+ Courses since 1998)

2024-2025 (AI-Assisted Development Era)

Cursor AI & AI-Assisted Development (Vibe Coding practices) • Claude Code CLI (AI assistant integration) • Gemini CLI (Google AI code generation) • GitHub Copilot Advanced (AI pair programming) • NotebookLM (AI research and documentation) • .NET 9 & C# 13 (Udemy) • Blazor Development (YouTube) • Dapper ORM (YouTube) • DDD Microsoft Microservices • Sistema de ventas real (C# + Angular + Xamarin, YouTube) • ASP.NET Core Advanced (Udemy) • .NET MAUI Cross-platform (Udemy) • Entity Framework Core • React & TypeScript (Udemy) • Uno Platform Multi-platform • Azure DevOps Complete Guide (Udemy) • Jira Advanced Administration

2023

Java 21 Virtual Threads - Concurrency improvements (Udemy) • Spring Boot 3.x Microservices - Cloud-native architecture • Docker & Kubernetes Advanced - Container orchestration

2021-2022

React + Redux (Udemy, Jul 2022) • .NET MAUI con Visual Studio 2022 (Udemy, Jul 2022) • DevOps, Docker, Kubernetes, Microservices y Azure .NET 6 (Udemy, Jul 2022) • Azure DevOps (Udemy, Jun 2022) • AWS Cloud Practitioner (Udemy, Jun 2022) • TDD - Test Driven Development con Java y JUnit (Udemy, Dec 2021) • Patrones de Diseño y principios SOLID (Udemy, May 2021) • Refactorizar código Java (Udemy, Mar 2021)

2019-2020

Java 8 Funcional y Lambda (Udemy, Sep 2019) • Microservicios con Spring Boot / Netflix Eureka (Udemy, Sep 2019) • Python para Machine Learning (Udemy, Sep 2019) • Curso de Python 3 (Udemy, Aug 2019) • Desarrollo de videojuegos con Unity (Udemy, Jun 2019) • API RESTful con Laravel (Udemy, May 2019) • Android con Kotlin + Firebase + Google (Udemy, Apr 2019) • Machine Learning (Udemy, Mar 2019) • DevOps: Las artes marciales del software (Udemy, Jun 2020)

2017-2018

Angular 6 Avanzado (Udemy, Jan 2018) • Curso avanzado de Docker (Udemy, Jan 2018) • Spring Framework 5 (Udemy, Jan 2018) • Persistencia de datos con Java: Hibernate + Spring JPA (Udemy, Jan 2018) • ASP.NET Core MVC (Udemy, Nov 2017) • Xamarin: Build Android and iOS Apps (Udemy, May 2017)

2015-2016

Git + GitHub (Udemy, Mar 2016) • Desarrollo web JavaScript, Angular, Node y MongoDB (Udemy, Apr 2016) • SEO para WordPress (Udemy, Feb 2015) • Community Manager, Redes sociales (HP Formación, May 2014) • Marketing 2.0 (Grupo Fides21, Mar 2013) • Team Building. Gestión de Liderazgo (Fides21, Dec 2013)

2003-2006

IBM Rational V7 (Clearcase, SOA, Business Modeler, Sep 2006) • IBM DB2 (Sep 2006) • Infaimon Sherlock - Visión Artificial (May 2006) • Infaimon CVB - Visión Artificial (May 2006) • Gestión De Proyectos (Oesia, 160h, Jan 2005) • Programación Visual C++ (Oesia, 40h, May 2004) • Administración SQL Server (Sunion Gesfor, 40h, Nov 2003) • Programación Java (Oesia, 40h, Oct 2003)

2002-2003

Optimización Oracle 8i (MR Informática, 80h, Jun 2003) • PL/SQL (Dayfisa, 40h, Apr 2003) • XML (IBM Learning, 30h, May 2003) • Administración Oracle (Dayfisa, 40h, May 2003) • Macromedia Flash (IBM Learning, 30h, Mar 2003) • Ingeniería De Software (Sunion Gesfor, Jan-Mar 2003) • SAP MM - Verificación De Facturas (SAP España, 25h, Oct 2002) • Programación Avanzada Java (IBM Learning, 25h, Apr 2002) • Administración AIX (IBM Learning, 30h, Apr 2002) • Programación Avanzada RPG IV (AS/400) (IBM Learning, 50h, Feb 2002)

1998-2001

Programación Java (Gesein, 100h, Feb-Apr 2001) • Cobol - CICS - DB2 (Cap Gemini, 160h, 1999) • Técnico En Sistemas Unix / Oracle (Sunion Gesfor, 350h, 1998) • Microinformática (Academia Teide, 300h, 1998)

LANGUAGES

Spanish: Native • **English:** Professional level (technical documentation, written communication)

ADDITIONAL INFORMATION

- **Portfolio:** <https://rsvidal.github.io> - Terminal-style interactive portfolio showcasing 25+ years of experience
- **GitHub:** github.com/rsvidal - Open source contributions and personal projects
- **Work Arrangements:** Available for new opportunities and collaborations. Open to remote/hybrid work arrangements
- **Location:** Madrid, Spain (European Union) - Available for EU projects
- **Philosophy:** 25+ years applying software engineering best practices. Expert in modern development methodologies and architectural patterns. Strong advocate for clean code and quality engineering practices. Continuous learner since 1998