

RAFAEL SAN VIDAL

Senior Software Developer | AI-Assisted Development Expert | Healthcare Domain Specialist

25+ YEARS PROFESSIONAL EXPERIENCE | 19+ YEARS HEALTHCARE EXPERTISE






sanvidal1@gmail.com [+34 650953905](tel:+34650953905) [Madrid, Spain \(EU\)](https://www.linkedin.com/in/sanvidal1) [LinkedIn](#) [GitHub](#) [Web](#)

PROFESSIONAL PROFILE

Senior Software Developer with 25+ years of professional experience in enterprise solutions development. My journey started at age 13 with first 8-bit personal computers, writing my 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.

AI-ASSISTED DEVELOPMENT TOOLS (2024-2025)

 Cursor Pro AI-powered code editor • INTEGRATED	 Claude Code CLI-based AI assistant • INTEGRATED	 Gemini CLI Google's AI assistant • INTEGRATED	 GitHub Copilot AI pair programming • INTEGRATED	 NotebookLM AI research tool • RESEARCH
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PROFESSIONAL EXPERIENCE

Becton Dickinson and Company 2005 - Present (19+ years)
Senior Software Developer | Healthcare Solutions

Key Responsibilities <ul style="list-style-type: none">Full-stack development (EMEA region)Architecture design, UI/UX, securityCI/CD, DevOps, database managementTeam mentoring and code review	Healthcare Domain (19+ years) <ul style="list-style-type: none">HL7/HL7-FHIR protocol implementationASTM standards, RFID integrationReal-time data processingMirth Connect integration platform
Quality & Security <ul style="list-style-type: none">Fortify OnDemand (SAST), SonarQubeOWASP Top 10, vulnerability assessmentHIPAA, GDPR compliancePenetration testing, code coverage	Multi-Database Expertise <ul style="list-style-type: none">MySQL, MariaDB, SQL Server, Oracle, DB2Flyway, Entity Framework migrationsCross-database compatibility

.NET 9C# 13Java 21Spring BootSpring Data JPASpring SecurityReactAngularTypeScriptBlazorThymeleafBootstrapTailwindSQL Server

MySQLOracleIBM DB2MariaDBAzure DevOpsDockerGitJiraSignalRWebSocketsSocket.ioWPFWinUIUno PlatformRCP / RAP

Omnibona S.L 2014 - 2015
Software Developer (Part-time) | Multi-platform Health Application

Design and development of multi-platform application about healthy habits. Nutrition and exercises in game mode for startup company.

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

Oesia 2003 - 2005 **Easynet España S.A.** 2003
Software Developer **Support Technical**

Healthcare, Telecom, Public Services. Clients: Telefónica, HP, Siemens

Technical support and customer service

.NET C# SQL Server Oracle

L'Oréal Spain 1998 - 2003 (5 years)
SAP Key Business | Business Analyst

SAP R/3 Project Leadership <ul style="list-style-type: none">Business Key for SAP R/3 (FI, CO, MM)Project planning, design, implementationABAP IV programming, reports developmentBusiness requirements, stakeholder mgmt	Historical Projects <ul style="list-style-type: none">Y2K and Euro currency conversionAccounts and Purchasing systemsAS/400 and IBM AIX integrations
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SAP R/3ABAP IVC++RPG4GLAS/400IBMAIXOracleCA Ingres

Ministerio de Asuntos Exteriores 1998
Software Developer | Diplomatic Passports Management

Design and development of application to manage diplomatic passports

4GL CA Ingres


COMPLETE TECHNOLOGY STACK

Backend/Languages .NET 9 / C# 13 Java 21 Spring Boot 3.x ASP.NET Core 9 Node.js / Express Python / Django PHP / Laravel	Frontend React Angular TypeScript Blazor WebAssembly WPF / WinForms Uno Platform HTML5 / CSS3 Vue.js	Databases SQL Server MySQL / MariaDB PostgreSQL Oracle IBM DB2 MongoDB Redis Cassandra	Cloud & DevOps Azure / AWS Azure DevOps Docker Kubernetes Terraform Git / GitHub Jenkins CI/CD Pipelines	Testing JUnit / Mockito xUnit / Moq Selenium Playwright Jest / Vitest TDD / BDD
Spring Ecosystem Spring Data JPA Spring Security Spring MVC Thymeleaf Flyway Spring Cloud	.NET Ecosystem EF Core / Dapper NLog / Serilog AutoMapper Polly.NET SignalR FluentValidation	Architecture Clean Architecture DDD CQRS Microservices Event-Driven SOA	Methodologies Scrum / Kanban XP TDD / BDD SOLID Principles Clean Code Design Patterns	Quality & Security Fortify (SAST) SonarQube OWASP Top 10 HIPAA / GDPR Penetration Testing
Mobile Development Kotlin Android Studio	Historical Languages ABAP IV (SAP) RPG (AS/400) 4GL (Ingres) COBOL Pascal C++	Enterprise Systems SAP R/3 (FI, CO, MM) ABAP IV Programming Business Analysis AS/400 Systems IBM AIX	Big Data & Analytics IBM Cognos Talend ETL Elasticsearch Prometheus Grafana	Microservices & Messaging Apache Kafka RabbitMQ Spring Cloud (Eureka, Hystrix) Event-Driven Architecture
Specialized Technologies Blockchain & Web3 (Solidity, Ethereum) Game Development (Unity 3D, C#) IoT (Arduino, Raspberry Pi) Computer Vision (Abbyy Technologies) Web Frameworks (WordPress, Joomla)	Application Servers Apache Tomcat Microsoft IIS Oracle WebLogic WildFly IBM WebSphere	Project Management Jira Confluence	AI Tools Cursor Claude Code Gemini CLI GitHub Copilot Azure OpenAI Services Semantic Kernel NotebookLM	Development Tools Visual Studio Professional Visual Studio Code Cursor Eclipse IBM Rational Suite Postman Insomnia

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 (HEALTHCARE)




BD Support System - Hospital Inventory Management

Clean Architecture +DDD enterprise platform

- Hospital equipment tracking and location management system
- Clean Architecture with Domain-Driven Design (4 layers)
- 29 architectural patterns implemented (Repository, Specification, Unit of Work, etc.)
- Multi-database support (SQLite, MySQL/MariaDB, SQL Server, Oracle, DB2)
- JWT authentication with refresh tokens + Role-Based Access Control
- Cross-platform UI: React (Web) + Uno Platform (6 platforms)
- 115+ comprehensive tests (Unit + Integration + E2E with Playwright)
- Complete technical documentation (30+ detailed docs)
- Background jobs with Hangfire + Real-time notifications with SignalR

.NET 9, C# 13, Clean Architecture, DDD, CQRS, MediatR, Multi-DB, JWT, RBAC, Entity Framework Core 9, Minimal APIs, Swagger, AutoMapper, FluentValidation, Hangfire, SignalR, Uno Platform, React, TypeScript, XAML, Android, iOS, WebAssembly, Windows, macOS, Linux, Vitest, Playwright, xUnit, Moq



ScanBatch OCR - Document Processing System

Batch scanning with OCR and barcode recognition

- Abbyy SDK integration for high-quality OCR
- Barcode recognition library for automated processing
- TWAIN scanner driver support for hardware integration
- Windows Service daemon for background processing
- In production across 40+ hospitals

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
- Clean Architecture with Domain-Driven Design
- Real-time dashboard with WebSockets (Stomp.js)
- JWT authentication & session management
- WinUI 3 desktop application
- RFID reader integration (CAEN, Impinj)
- Distributed caching & high availability
- In production across 40+ hospitals

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, macOS, Linux
- XAML-based declarative UI
- Custom controls library for consistent design

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




BD WiderLab System - Phlebotomy Room Management

Integral management of extraction rooms with HL7 messaging broker

- End-to-end workflow for phlebotomy room operations
- HL7 messaging broker for interoperability with hospital systems
- Integration with diagnostic devices
- In production across 40+ hospitals

Java, Eclipse, HL7

LEARNING & EXPERIMENTAL PROJECTS




Azure AI Samples & Training

Microsoft official AI samples and courses

- Microsoft official ai-samples repository (40+ examples)
- Semantic Kernel tutorials: Hello SK, Chat History, Plugins, Logging
- Quickstarts: Text Summary, Chat App, Function Calling
- Local models: Phi, LLaMA examples
- AI courses 2024: Prompt Engineering, AI Development

C#, Azure OpenAI, Semantic Kernel, Microsoft.Extensions.AI, LLM Evaluation, OpenAI API




Cloud Architecture

Azure + AWS deployment, DDD, TDD, IA integration

- Azure deployment with .NET 8
- Azure Functions serverless
- AWS deployment with Spring Boot
- Cloud architecture patterns and best practices

Azure, AWS, .NET 8, Spring Boot, DDD, TDD, Azure Functions, AWS Elastic Beanstalk




Cloud Functions

Serverless Computing

- Azure Functions development
- AWS Lambda implementation
- Serverless architecture patterns

.NET 9, Azure Functions, AWS Lambda, Serverless




Microservices with Kubernetes & Azure

Real deployed microservices architecture

- 3 microservices deployed to Azure Kubernetes Service
- Services: Gateway, Libreria (MongoDB), Seguridad (SQL Server)
- Docker images published to Docker Hub
- Kubernetes manifests (deploy.yml, service.yml)
- JWT authentication and load balancing
- GitHub: github.com/rsvidal/microservices-example1

Kubernetes, Azure AKS, Docker, .NET Core, MongoDB, SQL Server, JWT




React Full Stack

Complete React + Node.js + MongoDB

- Full-stack web application development
- State management with Redux
- TypeScript integration

React, TypeScript, Node.js, Express, MongoDB, Redux




Microservices Netflix

Spring Cloud Microservices implementation

- Netflix stack implementation
- Service discovery with Eureka
- Circuit breaker pattern with Hystrix

Spring Boot, Eureka, Hystrix, Docker, Kubernetes




Android Development with Kotlin

Native Android app development course

- Complete Kotlin course with Android app structure
- Firebase authentication with Google OAuth
- Android UI/UX with ConstraintLayout
- Testing with JUnit and Espresso

Kotlin, Android Studio, Gradle, Firebase Auth, JUnit, Espresso




IoT & Embedded Systems Suite

Arduino, Ethernet Shield, Bluetooth, Web Services, Mobile Integration

- IoT system with Arduino and Ethernet Shield
- Web Services for remote communication
- CoAP and REST protocols for IoT
- Bluetooth integration for mobile devices
- Xamarin mobile app for remote control

Arduino, Netduino, C++, Ethernet Shield, Bluetooth HC-05, CoAP Protocol, aREST API, Xamarin, Android, Web Services




Blockchain/Web3 Development Suite

Solidity, Web3.js, Truffle, Ethereum, Smart Contracts

- Token ICO (Deka Token) with complete functionality
- Smart contracts for token management
- Ethereum testnet integration
- Web3 frontend for contract interaction
- Wallet integration system

Solidity, Web3.js, Truffle, Ethereum, Smart Contracts, JavaScript



Unity Game Development

2D game development with Unity 2020.3


- Complete 2D game with Unity
- Interactive text adventure game
- Dialogue and narrative system
- Game mechanics implementation
- Custom assets and sprites


Unity 2020.3, C#, Game Development, 2D Graphics


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)**
Formación Integral en Arquitectura Cloud, DDD, TDD e IA • Desarrollo con IA • Introducción a la IA y Prompt Engineering • Claude Code CLI • Gemini CLI • NotebookLM • .NET 9 & C# 13 • Blazor Development • Dapper ORM • DDD Microsoft Microservices • Sistema de ventas real (C# + Angular + Xamarin) • React & TypeScript • Uno Platform • Azure DevOps Complete • Jira Advanced


 **2023**
Ionic (app) y Net Core (backend) (Udemy) • Go / Golang desde las bases (Udemy) • Big Data Fundamentals (Udemy) • Dart & Flutter (Udemy) • Vue.js avanzado (Udemy)


 **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 (Udemy, Jun 2022)


 **2021**
Go / Golang (Udemy, Ago 2021) • TDD - Test driven development con Java y JUnit (Udemy, Dic 2021) • Patrones de Diseño y principios SOLID (Udemy, May 2021) • Refactorizar código Java (Udemy, Mar 2021)


 **2020**
DevOps. Las artes marciales del software (Udemy, Jun 2020)


 **2019**
Java8. (Funcional y lambda) (Udemy, Sep 2019) • Microservicios con Spring Boot / Netflix Eureka (Udemy, Sep 2019) • Programación Python para Machine Learning (Udemy, Sep 2019) • Curso de Python 3 (Udemy, Ago 2019) • Desarrollo de videojuegos con Unity (Udemy, Jun 2019) • Mi primer videojuego con Unity (Udemy, Jun 2019) • API RestFul con Laravel (Udemy, May 2019) • Dominando Laravel. De principiante a expert (Udemy, May 2019) • Android con Kotlin + Firebase + Google (Udemy, Abr 2019) • Machine Learning (Udemy, Mar 2019) • Curso de Django (Udemy, Ene 2019)


 **2018**
Implementación de soluciones en Microsoft Azure (Udemy, Nov 2018) • Python + Django (Udemy, Jul 2018) • Desarrollo de dApps en la blockchain de Ethereum (Udemy, Jun 2018) • Introducción a blockchain. criptomonedas y Ethereum (Udemy, Jun 2018) • Xamarin Forms y Azure (Udemy, Mar 2018) • Angular 6 avanzado (Udemy, Ene 2018) • Curso avanzado de Docker (Udemy, Ene 2018) • Spring Framework 5 (Udemy, Ene 2018) • Persistencia de datos con Java. Hibernate + Spring JPA (Udemy, Ene 2018)


 **2017**
ASP.NET Core MVC (Udemy, Nov 2017) • Curso de iniciación a Haskell (Udemy, Sep 2017) • Xamarin. Build Android and IOS Apps (Udemy, May 2017) • Servicios con WCF (Udemy, Apr 2017)


 **2016**
Git + GitHub (Udemy, Mar 2016) • Desarrollo web Javascript, Angular, Node y MongoDB (Udemy, Apr 2016)


 **2015**
SEO para WordPress (Udemy, Feb 2015) • Aprende a triunfar con SEO (Udemy, Feb 2015)


 **2014**
Community Manager, Redes sociales (HP Formación, May 2014)


 **2013**
Marketing 2.0 (Grupo Fides21, Mar 2013) • Team Building. Gestión de Liderazgo (Fides21, Dec 2013)


 **2006**
IBM Rational V7. Clearcase, SOA, Business Modeler (Sep 2006) • IBM DB2 (Sep 2006) • Infaimon Sherlock. Vision Artificial (May 2006) • Infaimon CVB. Vision Artificial (May 2006)


 **2005**
Gestión De Proyectos (Oesia, 160h, Jan 2005)


 **2004**
Programación Visual C++ (Oesia, 40h, May 2004)

 **2003**
Administración SQL Server (Sunion Gesfor, 40h, Nov 2003) • Programación Java (Oesia, 40h, Oct 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)

 **2002**
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)

 **2001**
Programación Java (Gesein, 100h, Feb-Abr 2001)

 **1999**
Cobol – CICS – DB2 (Cap Gemini, 160h, 1999)

 **1998**
Técnico En Sistemas Unix / Oracle (Sunion Gesfor, 350h, 1998) • Microinformática (Academia Teide, 300h, 1998)

Total courses completed: 80+ | Platforms: Udemy, IBM Learning, Oesia, Cap Gemini, Academia Teide, HP Formación, Fides21
Active learner since 1998 (25+ years of continuous training)

ADDITIONAL INFORMATION

- **Portfolio:** <https://rsvidal.github.io> - Terminal-style interactive portfolio
- **Philosophy:** 25+ years applying software engineering best practices. Expert in modern development methodologies and architectural patterns. Strong advocate for clean code and quality engineering. Pioneer in AI-assisted development (Cursor, Claude Code, Gemini CLI, GitHub Copilot)
- **Healthcare Domain:** 19+ years specialized experience including HL7/HL7-FHIR protocols, ASTM standards, RFID integration, real-time data processing for critical systems
- **Work Arrangements:** Available for new opportunities and collaborations. Open to remote/hybrid work arrangements in EU