

Ariadne Gonçalves Pinheiro

Senior Software Engineer & Forward Deployed AI Engineer | Full Stack .NET

Rio de Janeiro, RJ, Brazil

ariadne.pinheiro@gmail.com | +55 21 96954-1543

[LinkedIn](#) | [GitHub](#) | [ORCID](#)

Professional Summary

Senior Software Engineer and Forward Deployed AI Engineer with 19+ years of verifiable experience architecting mission-critical systems and bridging the gap between Artificial Intelligence and complex enterprise workflows. Specialized in robust software engineering (C#, .NET 10, Clean Architecture, DDD) and navigating the full data lifecycle — from severe relational database optimization (Oracle SQL, T-SQL, BigQuery) to deploying Generative AI models and production-ready RAG (Retrieval-Augmented Generation) pipelines.

Deeply experienced in orchestrating Cloud Computing infrastructure (AWS/Azure) alongside a mature DevOps culture (Docker, Kubernetes, CI/CD automated pipelines). Backed by a strong technical and academic foundation (MBA in IT Governance at UFRJ and Machine Learning/K-NN applied research at UFF), I act as a strategic and technical liaison between cutting-edge engineering output and strict business compliance needs, consistently delivering scalable, secure, and high-impact software solutions.

Professional Experience

Forward Deployed AI Engineer

Corsa Dourada Digital Solutions | Jun 2025 – Present | Rio de Janeiro, Brazil (Remote)

- Bridge the gap between cutting-edge Artificial Intelligence and complex enterprise workflows, acting as a customer-facing engineer to architect, deploy, and scale production-ready AI solutions. Partner directly with stakeholders to translate critical business bottlenecks into high-performing, reliable software systems.
- Client Embedding & Solution Discovery: Partner closely with enterprise clients and cross-functional teams to diagnose operational bottlenecks, scope high-ROI AI/ML use cases, and design tailored technical roadmaps.
- Generative AI & LLM Integration: Architect and deploy production-grade Generative AI applications, Retrieval-Augmented Generation (RAG) pipelines, and custom LLM workflows integrated seamlessly into existing enterprise environments.
- Robust Software Architecture: Build resilient, secure backend integrations and APIs using C#, .NET 10, and Python, applying Clean Architecture and Domain-Driven Design (DDD) principles to ensure long-term maintainability.

- **Data Engineering & Analytics:** Design and optimize data pipelines, relational/vector databases (Oracle SQL, SQL Server, BigQuery), and data transformation workflows to feed accurate, high-quality data into AI models.
- **Cloud & DevOps Deployment:** Oversee end-to-end deployments in cloud environments (AWS / Azure), implementing containerization (Docker/Kubernetes) and automated CI/CD pipelines for scalable, high-availability AI serving.
- **Technical Feedback Loop:** Act as the direct conduit between customer reality and core product engineering, identifying edge cases, driving continuous model evaluation, and ensuring strict data compliance and security.

Senior Software Engineer & Full Stack .NET Developer

State Department of Education | Jul 2022 – Present | Rio de Janeiro, Brazil

- Lead the comprehensive modernization and continuous evolution of mission-critical enterprise applications supporting the public education sector.
- Systematically transform rigid legacy monoliths into highly scalable architectures employing ASP.NET WebForms, ASP.NET MVC, .NET 10, and C# ecosystems.
- Apply Clean Architecture, Domain-Driven Design (DDD), and Hexagonal Architecture principles to completely decouple convoluted business rules, refactoring complex codebases into adaptive enterprise tools.
- Enforce rigorous code quality and infrastructure security standards by integrating automated testing methodologies (TDD/BDD) and static code analysis validation gates (SonarQube).
- Drive internal DevOps culture transformation through CI/CD pipeline automation, semantic versioning via Git, and containerization (Docker/Kubernetes), guaranteeing consistently reliable production deployments.
- Integrate complex third-party APIs (including OpenStreetMaps for geolocation logic), heavily optimize relational databases (Oracle SQL, SQL Server), and utilize modern Generative AI tools to measurably boost developer team productivity.

Senior Software Engineer & IT Consultant

Pinheiro Group and Sperle Web Development | Mar 2008 – Feb 2025 | Rio de Janeiro, Brazil

- Acted as the principal engineer spearheading the development and delivery of scalable, high-availability web applications and portals serving prominent federal and state-level government agencies (including the Ministry of Education and the armed forces).
- Engineered stable and reliable platforms capable of seamlessly handling millions of concurrent access requests, utilizing an extensive stack of PHP, SQL, JavaScript, HTML/CSS, WordPress, and Joomla.

- Provisioned, orchestrated, and managed complex cloud infrastructure frameworks through AWS and Azure, ensuring robust load balancing and highly secure data storage protocols for public-facing digital services.
- Commanded the end-to-end software development lifecycle — navigating from multidisciplinary stakeholder requirements gathering through prototyping, deployment, CI/CD integration, and high-level ongoing maintenance.
- Aggressively optimized heavy databases, refactored sprawling legacy structures, and deployed advanced performance tuning strategies to adhere to strict e-government accessibility and systemic usability compliance standards.

R&D Machine Learning Researcher

Fluminense Federal University (UFF) / CAPES | Sep 2020 – Oct 2021 | Rio de Janeiro, Brazil

- Conducted advanced academic and technical R&D in Machine Learning environments, focusing sharply on computational data privacy and the implementation of the "right to be forgotten" in active predictive models.
- Developed and successfully adapted probabilistic online learning algorithms (K-NN and SAM-KNN) working extensively within Python environments (Scikit-learn, Scikit-Multiflow).
- Prototyped complex and massive data pipelines in order to isolate and mathematically evaluate the statistical impacts of forced data removal, completing technical validation partnerships with researchers at Paris-Tech University.

Core Competencies

- Engineering & Architecture Methodologies: Clean Architecture, Domain-Driven Design (DDD), Hexagonal Architecture, Microservices design patterns, TDD (Test-Driven Development), BDD, Code Review.
- Programming Languages & Frameworks: C#, .NET Core / .NET 10 ecosystem, ASP.NET WebForms / ASP.NET MVC, Python, PHP, JavaScript, Laravel, WordPress, Joomla CMS structures.
- Artificial Intelligence & Machine Learning: Generative AI workflows, robust RAG (Retrieval-Augmented Generation) architectures, LLM enterprise integration, predictive algorithm research (K-NN / SAM-KNN).
- Cloud Infrastructure, DevOps & Containerization: Microsoft Azure, AWS (Amazon Web Services), Docker orchestration, Kubernetes, CI/CD Pipeline automation, Git version control, DevOps Engineering Culture, SonarQube static analysis.
- Databases & Data Analytics Processing: Oracle SQL, SQL Server, BigQuery architecture, precise Relational Modeling, comprehensive Query Optimization.

Education

- Postgraduate Program in Information Security, Cybersecurity and IT Governance — Estratego, 2025 – Present.
- MBA in IT Governance, Projects and Services — Federal University of Rio de Janeiro (UFRJ), 2023–2025.
- Postgraduate Program in Information Technology and Innovation — Estratego, 2024–2025.
- Postgraduate Program in Software Engineering and Project Management — Estratego, 2023–2024.
- Bachelor's Degree in Computer Systems — Fluminense Federal University (UFF), 2019–2022.

Additional Training

- Basic Principles of Testing, Mutation and Automation — UFF, 2022.
- Academic research on online learning algorithms K-NN and SAM-KNN — PIBIC/UFF, 2020–2021.
- Agile Management Methods: Scrum, Kanban and agile best practices — TCE-RJ, 2023.
- SQL for Data Analysis 2.0 (BigQuery) — Dynamic Programming, 2023.
- Qlik Sense: Business Intelligence with Python + SQL — PRODERJ Academy, 2023.
- Artificial Intelligence: Smart Cities — IFAL & HUAWEI, 2021.