

# PEDRO REICHOW

pedroreichow3@gmail.com • linkedin.com/in/pedroreichow • pedroreichow.com.br

## SUMMARY

- Full Stack AI Engineer and Data Specialist with 5+ years building production-ready agentic AI systems, multi-agent architectures, and scalable data platforms.
- Deep expertise in designing autonomous AI agents, orchestrating multi-agent workflows, and integrating LLMs into enterprise-grade pipelines with human-in-the-loop governance.
- Expert in computer vision, RAG systems, knowledge graphs, and high-performance data pipelines processing 500GB+ daily.
- Proven track record of leading technical teams, founding technology ventures, and delivering agentic automation solutions across agriculture, healthcare, and fintech.

## TECHNICAL EXPERTISE

### Programming & Development

Python, TypeScript, JavaScript, SQL, Node.js, React, Django, FastAPI, Flask, GraphQL, gRPC, Microservices Architecture

### Data Engineering & Big Data

Apache Spark (PySpark, Spark SQL, Streaming), Apache Airflow, Delta Lake, Data Lake/Warehouse Architecture, ETL/ELT Pipelines, Data Modeling, Performance Optimization

### Specialized Technologies

### Artificial Intelligence & Agentic Systems

Agentic AI Architecture, Multi-Agent Orchestration (LangGraph, CrewAI, Agno, ADK), Large Language Models (Llama, Claude, Gemini, Kimi, Qwen), RAG Pipelines, Computer Vision (YoloX, OpenCV), NLP, Prompt Engineering, Model Context Protocol (MCP), Tool-Use Agents, Human-in-the-Loop Systems

### Cloud & Infrastructure

AWS (S3, Redshift, Glue, Lambda, EMR), Google Cloud Platform (BigQuery, Dataproc, Composer), Azure, Docker, Kubernetes, Infrastructure-as-Code, CI/CD

### Development Practices

EDUCATION

<b>Estácio University</b> <i>Bachelor of Science in Systems Analysis and Development</i>	2023
<b>Federal University of Santa Catarina (UFSC)</b> <i>Bachelor of Science in Electrical Engineering</i>	2023
<b>Federal Institute of Santa Catarina (IFSC)</b> <i>Technical Diploma in Electrotechnics</i>	2016

AREAS OF EXPERTISE & INNOVATION FOCUS

<b>Agentic AI &amp; Autonomous Systems</b> Multi-Agent Architectures, Agent Orchestration (Graph-based & DAG), Tool-Use Agents, Agentic Automation, Retrieval-Augmented Generation (RAG), MCP Servers, Human-in-the-Loop Governance, LLM Evaluation & Observability	<b>AI Applications</b> Computer Vision, Natural Language Processing, Multimodal AI Systems, Edge AI Computing, Conversational AI
<b>Data Science &amp; Engineering</b> Large-scale Distributed Systems, Real-time Analytics, Knowledge Graph Technologies, Vector Databases, Performance Optimization	<b>Emerging Technologies</b> IoT Integration, Virtual/Augmented Reality, Blockchain Applications
<b>Applied Research Domains</b> Agricultural Technology, Healthcare Innovation, Financial Technology, Smart City Solutions	

KEY ACHIEVEMENTS

- Designed and deployed multi-agent systems with graph-based orchestration for enterprise workflow automation.

- Built agricultural AI systems achieving >95% accuracy in disease detection for precision farming applications.
- Architected financial data processing systems handling 500GB+ daily transactions with 40% performance improvement.
- Pioneered healthcare VR applications compliant with HIPAA and FedRAMP standards.
- Founded technology consulting practice delivering agentic AI and enterprise automation solutions.

## PROFESSIONAL EXPERIENCE

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### Santodigital (Google Partner)

Jan 2024 – Present

#### *Cloud AI Solutions Architect*

- Architected production-grade RAG with BigQuery + Vertex AI, reducing document analysis from weeks to minutes with offline evaluation suites for retrieval quality.
- Implemented agentic reinforcement loops via ADK: observability logs feeding prompt fine-tuning, reducing hallucinations and improving faithfulness scores in production.
- Built multi-agent systems for enterprise clients: autonomous compliance automation, contract alert agents, auto-service with Zendesk handoff and human-in-the-loop governance for critical actions.

### CVS Health

Aug 2024 – Dec 2025

#### *Senior Software & Data Engineer | AI Observability*

- Architected SLOs for AI pipeline latency (p50/p95) and cost-per-token monitoring using Datadog/Grafana for healthcare AI systems in HIPAA/FedRAMP compliance.
- Built observability dashboards tracking faithfulness and relevance metrics for LLM outputs, enabling prompt version A/B testing and continuous improvement.
- Led full-stack development of enterprise agentic AI applications with predictive analysis, autonomous workflow orchestration, and multi-step reasoning pipelines.

### Capgemini Brasil

Jan 2022 – Dec 2023

#### *Senior Solutions Consultant (Solutions Consultant IV)*

- Architected Python-based API middleware and Knowledge Graph solutions for fraud detection and risk analysis in the financial sector, creating database abstraction layers.
- Developed sophisticated ontologies using Protege and RDF/OWL with REST APIs for complex business intelligence and semantic search.
- Collaborated with teams of 50+ engineers on enterprise data engineering optimizations and API integrations.

### Simulated Reality

Jan 2021 – Dec 2021

## ***Full Stack Engineer | VR & Real-Time Systems***

- Developed full-stack VR solutions using React frontend with Node.js backend for training and wellness applications with 3D object interaction and physics simulations.
- Built scalable REST APIs with queues for asynchronous processing and pub/sub for real-time communication between system components.
- Engineered pipelines for processing large 3D video files and game updates compiled in Unity and Unreal Engine.

## **QI Tech (Fintech)**

Jan 2019 – Dec 2020

### ***Senior Data Engineer***

- Processed 500GB+ daily with PySpark on Dataproc, optimizing gRPC latency and cloud cost efficiency — infrastructure patterns now applied to AI workloads.
- Designed Delta Lake on GCS with ACID transactions for audit compliance, enabling data versioning critical for ML reproducibility.

## **PecSmart (IoT & AgTech)**

Nov 2017 – Dec 2018

### ***Backend Developer & IoT Specialist***

- Built IoT + ML pipelines for livestock monitoring with Raspberry Pi and real-time behavioral analysis.

## **Fontes Promotora**

Jan 2017 – Oct 2017

### ***Backend Developer***

- Built scalable APIs using FastAPI, Flask, and Django REST, creating a middleware layer that abstracts database complexity from front-end applications.
- Developed robust web scraping solutions using Scrapy and Requests for enterprise data collection and automation.
- Delivered complete full-stack solutions with ReactJS frontend deployed on AWS and Docker containers.

## **ENTREPRENEURIAL EXPERIENCE**

### **MoveUp AI** San Francisco, CA - Remote

Jan 2025 – July 2025

#### ***Founding Engineer & Technical Co-founder***

- Co-founding AI-powered workforce intelligence platform serving 15+ enterprise teams with agentic Slack workflows, knowledge graphs, and autonomous team analytics.
- **Multi-Agent Architecture:** Designed graph-based agent orchestration with specialized agents (research, analysis, action) coordinating via shared memory and tool-use protocols.
- **MCP Infrastructure:** Architected TypeScript MCP (Model Context Protocol) servers enabling seamless agent-to-agent and agent-to-tool communication across enterprise ecosystems.

- **Agentic AI Development:** Built autonomous Python agents using Agno, LangChain, and LangGraph with multi-step reasoning, dynamic tool selection, and self-correction loops.
- **Knowledge Graph & Memory Systems:** Implemented Zep persistent memory, Supabase vector databases, and FalkorDB graph stores integrated with commercial LLMs (Anthropic, OpenAI) for long-term contextual agent memory.
- **Agentic Automation:** Developed end-to-end autonomous workflows with N8N orchestration and Slack integrations — agents that research, draft, review, and deliver without manual intervention.