

CONTACT

+56 9 3075 6467

hola@javiermujica.com

Santiago, Chile (Remote)

linkedin.com/in/javier-mujica

javiermujica.com/en

CORE SKILLS

- Agentic & Multi-Agent Architectures
- Advanced RAG & Hybrid Search (BM25 + Vector)
- MCP Protocol & Dynamic Tool Calling
- Vector Databases & High-Dim Embeddings
- LLMOps, Tracing & Quality Evals (Ragas)
- Computer Vision & Edge Telemetry
- High-Throughput Data Pipelines for AI
- AI Strategy, ROI & Product Roadmaps
- Scalable Serverless Cloud Architecture

TECH STACK

`Python (Adv)` `MCP Protocol` `LangChain` `LlamaIndex` `PostgreSQL` `pgvector` `OpenAI / Claude` `Gemini` `Supabase` `FastAPI` `GCP & AWS` `Docker` `Polars/Pandas` `GitHub Actions`

LANGUAGES

- **Spanish:** Native
- **English:** Professional Working Proficiency (Technical & Business)

JAVIER MUJICA CARVAJAL

Industrial Civil Engineer | **AI Engineer**

✦ Specialized in Agentic Architectures, RAG Systems, LLMOps, and Production AI Deployment

EXECUTIVE SUMMARY

Industrial Civil Engineer from Universidad de Chile with over 10 years combining analytical leadership and technical execution, specialized in the **design, development, and production deployment of Generative AI solutions, Autonomous Agents, and Data Pipelines**. Expert in **advanced Python, LLM orchestration (LangChain, LlamaIndex, MCP - Model Context Protocol), vector stores (pgvector, Supabase), and Cloud architectures (GCP/AWS)**. Proven track record bridging executive strategy with robust engineering, embedding **LLMOps, continuous observability, hallucination mitigation, and security guardrails** to enable reliable, scalable, and autonomous business workflows.

WORK EXPERIENCE

Mujica AI Lab SpA, Santiago (Remote)

MAR 2025 – PRESENT

Lead AI & Software Engineer

- Directed end-to-end design, construction, and operation of **autonomous assistants and agentic GenAI systems in production** for enterprise logistics, finance, and analytics clients.
- Architected **multi-agent ecosystems leveraging the Model Context Protocol (MCP)** and dynamic tool execution, integrating LLMs securely with transactional DBs, REST APIs, and document stores.
- Implemented **advanced RAG systems with Hybrid Search (BM25 + pgvector)** and contextual reranking, drastically cutting hallucinations while **reducing token consumption and operational costs by 35%**.
- Established robust **LLMOps frameworks, data contracts, and continuous observability (quality evals with Ragas**, latency, and drift monitoring), delivering fully traceable and compliant responses.

SaaS Platforms & Vision / AI Systems in Production

2024 – PRESENT

AI Architect & Backend Engineer

- Product Architect of **VerticApp.pro**: Real-time computer vision and telemetry SaaS for kinematic and biomechanical motion analysis in high-performance sports.
- Built multimodal inference pipelines with in-browser (Edge) keypoint extraction and **asynchronous Cloud microservices using FastAPI and sub-second latency WebSockets**.
- Designed high-concurrency trajectory and event storage in **PostgreSQL / Supabase with relational and vector capabilities**, using partitioning and HNSW indexing.
- Integrated LLM synthesis engines generating **automated technical diagnostics and personalized actionable feedback in structured JSON** for coaches and athletes.

Recursiva, Santiago (Remote)

MAY 2024 – MAY 2025

Automation & Data Pipeline Engineer

- Developed automated Python pipelines for high-volume ingestion, parsing, and normalization of heterogeneous data across major enterprises (**CCU, Transbank, PROGESTION**).
- Direct business impact: **Recovered over $80M CLP ($90K+ USD)** in client benefits (PROGESTION) and **reduced manual operational hours by 30%** (CCU).
- Engineered dedicated algorithmic monitoring scripts for **early anomaly detection, continuous transactional audits, and automated alerting** (Transbank).

LLMOPS & RELIABILITY

Continuous Evaluation (Evals)
Validation of factual correctness, retrieval context relevance, and synthetic test suites via Ragas.

Guardrails & Moderation
Prompt injection defense, sensitive PII redaction, and strict JSON Schema output validation.

Traceability & Observability
Chain-of-thought logging, latency tracing, semantic caching, and token-level cost attribution.

AI PRINCIPLES

- Context Grounding & Zero Hallucination
- Cost-Effective Routing (SLMs vs Frontier LLMs)
- Decoupled Logic & Tools via MCP
- Idempotency in Agentic Workflows
- Enterprise Security, Privacy & Data Governance

METHODOLOGIES

- LLMOps & CI/CD Pipelines
- Agentic Workflow Patterns
- Agile: Scrum & Kanban
- Domain-Driven Design (DDD)
- Technical Stakeholder Alignment
- Lean Startup & Rapid Prototyping

INFRA & TOOLS

`Cloud Run` `Cloud Tasks` `S3 / GCS` `WebSockets` `OpenAI API` `Anthropic API` `LiteLLM` `Postman` `Jira / Notion`

ONLINE PORTFOLIO

javiermujica.com/en#ai
Interactive showcase of production AI systems, autonomous agents, telemetry, and cloud architecture.

WORK EXPERIENCE (CONTINUED)

Roboris LTDA, Santiago
OCT 2019 – JUN 2021

Process & Quantitative Optimization Engineer

- Modeled and analyzed operational information flows and manufacturing costs, deploying a **quantitative control model that improved budget variance by 15%**.
- Redesigned plant operations using statistical modeling and real-time shop floor metrics, **reducing unplanned machinery downtime by 20%**.
- Identified organizational bottlenecks and implemented data-driven workflow optimizations that **boosted overall throughput by 10%**.

Ematris Consultores, Santiago
JAN 2015 – OCT 2015

Innovation & Business Model Consultant

- Formulated and modeled quantitative proposals for CORFO national innovation funds (FONDEF and VIU), winning **grants totaling $20M – $30M CLP**.
- Advised startup founders on traction metric modeling, technology hypothesis validation, and scalable commercial go-to-market architecture.

EDUCATION & CREDENTIALS

B.S. & Professional Degree in Industrial Civil Engineering — 2006 – 2014
Universidad de Chile, Santiago

Fullstack Developer (MERN & Software Architecture) — 2023
MindHub, Remote

U-LAB Methodology Certification (Leadership & Transformation) — 2018
Massachusetts Institute of Technology (MIT), Remote

FEATURED AI DEPLOYMENTS

VerticApp.pro — Computer Vision & Intelligent Feedback SaaS — IN PRODUCTION
Real-time computer vision inference architecture, kinematic telemetry, and LLM-driven personalized coaching insights formatted in strict JSON schemas.

Enterprise Multi-Agent Ecosystem & Advanced RAG — MUJICA AI LAB
Autonomous agent network integrated with Model Context Protocol (MCP) for enterprise data analytics, vector retrieval via pgvector, and active hallucination guardrails.

PROFESSIONAL REFERENCES

Ricardo Decker
CEO at Recursiva
+56 9 7766 0833
ricardo.decker@recursiva.cl

Corporate References
Clients & Technical Counterparts
Additional contacts from technical directors and enterprise project leads available upon request.