# GASTON AGUSTIN QUIROGA SERREZUELA

## Senior Backend Engineer

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## PROFESSIONAL SUMMARY

Senior Backend Engineer with 6+ years building scalable, high-performance systems in Python. Proven track record architecting microservices handling 1M+ daily plays. Expert in system design, performance optimization, and technical leadership. Specialized in FastAPI, PostgreSQL, distributed systems, and event-driven architectures. Currently pursuing Data Science bachelor's degree at Universidad de Buenos Aires, actively exploring machine learning, AI applications, and data-driven system architectures. Passionate about building production-grade software with great code quality and measurable business impact.

## TECHNICAL SKILLS

**Backend & Architecture:** Python, FastAPI, Django, Flask, Microservices, Event-Driven Architecture, RESTful APIs, System Design

**Databases & Messaging:** PostgreSQL (Sharding, Partitioning, Indexing), RabbitMQ, Redis, Vector Databases (Chroma DB)

**Cloud & DevOps:** AWS (EC2, S3, Lambda), Azure (AKS, Cloud Services), Docker, Kubernetes, CI/CD Pipelines

**Testing & Quality:** Unit Testing, Integration Testing, Load Testing (Locust), Code Review, Software Testing

**Observability:** Grafana, Prometheus, Jaeger, Distributed Tracing, Performance Monitoring

**Additional:** React, Angular, Shell Scripting, Git, Agile/Scrum, Technical Leadership, Mentoring

## PROFESSIONAL EXPERIENCE

**Senior Backend Developer** | Spincraft | Dec 2023 - Present (Remote)

*Gaming & Entertainment Platform - VLT (Video Lottery Terminal) Systems - RGS*

**System Architecture & Scalability:**

- Architected from scratch a VLT platform serving 200+ concurrent users processing 60k+ bets daily with real-time billing and management reporting capabilities
- Designed and implemented sharding solution that **increased system capacity 5x** (validated through Locust load testing), enabling horizontal scalability for growing user base
- Led technical decisions on microservices architecture spanning platform management, wallet service (balance/transaction handling), and third-party game integrations
- Contributed to a RGS integrated with multiple casinos serving **1M+ plays per day** with high-availability requirements

**Performance & Observability:**

- **Reduced incident response time by 70%** by implementing comprehensive observability stack (Jaeger distributed tracing, Grafana dashboards, Prometheus metrics) replacing traditional log aggregation

- Established monitoring best practices including SLA tracking, alerting thresholds, and performance baselines
- Optimized database queries across partitioned PostgreSQL tables, improving RTP (Return to Player) calculation performance

**Code Quality & Leadership:**
- Maintained **80%+ test coverage** across all services through rigorous TDD practices and automated testing pipelines
- Participated in code reviews ensuring architectural consistency and best practices across development team of 5-6 engineers
- Drove adoption of event-driven patterns using RabbitMQ for asynchronous processing and service decoupling

**Technologies:** FastAPI, PostgreSQL (Sharding/Partitioning/Indexing), RabbitMQ, AWS, Docker, React, Grafana, Prometheus, Jaeger, Locust

## Backend Developer | SouthernCode | Sep 2022 - Dec 2023 (Remote)
*B2B Location-Based Accommodation Platform*

**Technical Leadership & Architecture:**
- Served as **technical referent** influencing architecture decisions and providing guidance to development team
- Designed and built location-based bidding system enabling accommodation providers to respond to customer requests within geographic zones, implementing real-time notification system and automated booking workflows
- Architected microservices infrastructure managing ~8 containerized services on Azure Kubernetes Service (AKS)

**Performance Optimization:**
- **Reduced API payload sizes and bandwidth consumption** through response optimization and compression middleware implementation
- Improved inter-service synchronization efficiency by refactoring product data propagation across microservices, eliminating redundant operations
- Implemented caching strategies and database indexing improving query response times

**DevOps & Mentoring:**
- Managed CI/CD pipelines using Azure DevOps, automating deployment and testing workflows
- Mentored junior developers on best practices, code quality, and system design principles
- Led technical discussions on service boundaries, data consistency patterns, and scalability strategies

**Technologies:** FastAPI, Django, Azure (AKS, Cloud Services), Kubernetes, Docker, PostgreSQL, Redis, CI/CD

## Full Stack Developer | Héritas | May 2022 - Sep 2022
*Genomics & Healthcare Technology*

- Built microservices and web applications using React frontend with Flask/Django backends for genomics data processing
- Managed AWS infrastructure including EC2, S3, and Lambda functions

- Implemented CI/CD pipelines automating deployment and testing workflows

**Technologies:** React, Flask, Django, AWS (EC2, S3, Lambda), PostgreSQL, Docker, CI/CD

**Integration Developer** | Wetcom | Dec 2019 - May 2022
*IT Services & Integration Solutions*

- Designed and developed RESTful APIs for third-party service integrations across diverse business domains
- Built microservices architecture handling complex integration workflows and data transformations
- Implemented CI/CD pipelines using BitBucket, reducing deployment time and improving reliability
- **Mentored junior developers** on Python best practices, API design, and testing methodologies

**Technologies:** Django, Flask, React, PostgreSQL, Docker, BitBucket CI/CD, Microservices

## EDUCATION

**Data Science** (In Progress - 19/27 subjects completed)
Universidad de Buenos Aires (FCEN) | 2020 - Present
*Equivalent to Bachelor of Mathematics & Statistics + MSc*

**System Engineering** (Incomplete)
Universidad Tecnológica Nacional (UTN) | 2016 - 2020

## CERTIFICATIONS

- Master Vector Database with Python for AI & LLM Use Cases (2025)
- Machine Learning A-Z: Hands-On Python & R in Data Science (2022)
- Istio Hands-On for Kubernetes (2022)
- Modern React with Redux (2019)

## LANGUAGES

**Spanish:** Native
**English:** Professional Working Proficiency