

Pablo Alejandro Guatibonza Briceño

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Software engineer with 2 years of experience developing AI-powered systems, including Retrieval-Augmented Generation (RAG) pipelines, MCP, LLMs, LangChain-based applications, and containerized deployments on AWS and Kubernetes. Proven ability to integrate LLMs into production environments, automate CI/CD pipelines, and build secure, scalable architectures. Passionate about using AI to solve real-world problems

Application developer	IBM	August 2024-Present
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Technologies: Python, AWS (EKS, EC2, VPCs) , MQ, Azure Pipelines, Kubernetes, Docker, HAProxy, TLS

- Migrated IBM MQ queue managers from OpenShift to Amazon EKS, deploying with custom YAML and automating rollout via Azure Pipelines.
- Configured TLS certificates, secured channels, and HAProxy rules to enforce encrypted communication and block insecure traffic outside the EKS cluster.
- Enabled clustered MQ communication, ensuring queues created in one manager were accessible across all queue managers for seamless service integration.

Intern	IBM	January -July 2024
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Technologies: Python, Langchain, FastAPI, Kubernetes, Docker, RAG, Kafka, Tekton, Github actions

- Created automated CI/CD pipelines for continuous delivery, significantly reducing feature deployment times.
- Implemented an AI solution utilizing Retrieval-Augmented Generation (RAG) and Prompt Engineering to handle and interpret IBM MQ error logs, providing automated problem-solving capabilities with high accuracy.
- Integrated LLM-based solutions with existing enterprise APIs and cloud-based platforms, ensuring seamless operations and optimal performance.

Teaching Assistant	University of the Andes	2021,2022, 2023
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Technologies: Java, Python

- Taught sorting algorithms, dynamic programming, graph theory, NP completeness and python essentials

Projects:

AI-Powered Chatbot Tutor	University of the Andes	August-december 2024
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- Developed an AI-driven educational chatbot using GPT-4, LangGraph, and Streamlit, integrated into the Universidad de los Andes platform.
- Optimized response accuracy, achieving over 90% user satisfaction through real-world testing.
- The project was accepted as a short paper at the **International Conference on Intelligent Tutoring Systems (ITS 2025)**, recognizing its contribution to AI-assisted education.

AutoAssist chatbot	University of the Andes	July 2024 - Present
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- Engineered an advanced AI chatbot for customer service automation in car dealerships, performing tasks like vehicle comparisons, pricing inquiries, and scheduling test drives via WhatsApp.
- Leveraged embeddings and vector databases for improved context-awareness and user experience, significantly enhancing customer interaction efficiency.

Achievements:

- Qualified for the Latin American Programming Marathon after placing among the top 20 teams in Colombia.

Education:

University of the Andes (2020-2024)

B.Sc. in Systems and Computing Engineering – GPA: 4.4 / 5.0.

Recipient of the *Quiero Estudiar* scholarship, a merit- and need-based program supporting high-achieving students

Courses: Data structures, algorithm design and analysis, OOP in java, databases, software architecture and design.