# JAIME "JIMMY" CALAHORRANO

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## SENIOR DEVELOPER, LEAD DEVELOPER, MANAGER

***Highly motivated with 15+ years' progressively responsible experience in object-oriented program design and development utilizing expertise in Python, Rust and C++***

Success developing numerous key features to financial, forecasting, gaming, and data management applications, significantly enhancing functionality and increasing product profitability. Talent for delivering quality software applications for corporate leaders in diverse industries. Proven expertise in back-end development, mentoring, configuration, troubleshooting, training, and support.

### CORE COMPETENCIES:

- Financial Applications
- Functional Programming
- OOD / OOP
- Python, C++, Rust, Solidity
- Backend development
- Software Development Life Cycle
- Framework Implementation
- RDBMS and NoSQL
- Distributed applications / Actor Model

### TECHNICAL BACKGROUND:

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| Languages: | Python, C++, C#, Solidity, Rust, Javascript, Java, SQL, Erlang |
| Principles & Standards: | IOC, NoSQL, Microservices, TDD, FIX, XML, Rest, TCP/IP, Software Refactoring, Design Patterns, ZeroMQ |
| Tools: | **Cloud:** AWS, Azure, **Linux:** SSH, Bash, VI, Ubuntu, Fedora; **DBs**: NoSQL, Cassandra, Oracle, SQL Server, Redis, ElasticSearch, Redis, MySQL  **C++:** C**,** STL, GCC, CMake, Visual Studio Code; **Python:** 3.7, Tornado, NumPy, PyCharm, Jupiter, Pandas, generators, decorators, threading  **Rust:** Tokio, Asynch  **Other:** GitHub, Kafka, Docker, Jenkins, ZMQ |

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## PROFESSIONAL EXPERIENCE

MICROSOFT XBOX ACTIVISION, CHICAGO, ILLINOIS (REMOTE)
Lead Engineer/Manager, 2021 to Jan 2024
Led, designed, and developed the next generation of core marketing tech APIs for player engagement for the Call of Duty Franchise. ***Project highlights include…***

- Designed and developed with Python and C++, the next generation of Segmentation services that enables player segmentation (100+ Millon players) and allow dynamic segmentation capabilities to several COD back-end services. Tech Included: Rest, Redis, Elastic Search, Kafka, Kubernetes.

- Developed in Python new features to ABT Services by extending the AB enrollment engine, service to service AB enrollments and integration with Segmentation via Kafka. Extended cluster to provide throughput of 30K RPS in an ecosystem that serves 3k game logins per second.

- Created data migration scripts to move player data from on premise MySQL Cluster to Amazon RDS MySQL.

- Developed the Player Ingestion pipeline for Segmentation targeting a daily load of 100+ Million of players with a consumption ratio of 50K players/second, using Python and Kafka.

- Raised a team of 5 developers. Interviewed, hired, mentored, and managed the team responsible for the development and ownership of Segmentation and ABT.

- Developed a POC for Rust execution from Python for performance speed up 30x for Segmentation project

- Onboarded several COD back-end services to the Seg/AB ecosystem including Moderation, StoreFront (GCP client) and Notification services.

CHICAGO TRADING COMPANY, CHICAGO, ILLINOIS
Senior Software Engineer, 2019 to 2021
Developed trade capture components in Azure, that allows the firm to collect trading activity. ***Project highlights include...***

♦ Developed in C++, Python and Azure the infrastructure that allows to collect trading activity for exchanges including CBOE, NASDAQ. The captures are stored in Snowflake DB

♦ Supported quants and traders and provided directions around the usage of the collected data.

♦ Performed selective market data reconciliation within Snowflake and Raw Data sources using Python. Data reported in Tableau

♦ Suggested and implemented the usage of UI components in C# for aggregated market data rendering. Directed the team on C#/WebApi interaction.

BMO Capital Markets, CHICAGO, ILLINOIS
**Senior Developer Cross Business Risk,** 2015 to 2019
Developed, supported and enhanced multiple trading applications for the FI Desk. ***Project highlights include...***

♦ Developed in Python a reconciliation system that matches trades reported by ECN with the trades reported by booking systems such as Bloomberg TOMS and DSTS. Used metadata constructions for setup of recon specification/process within Python.

♦ Developed a reporting application with C# and SQL Server that allows Senior Manager to obtain performance metrics of the desks such as traded away trades vs in house done trades organized by trader, customer, product types, etc.

♦ Developed multiple Python scripts that run in the top of the booking application – Broadway. The scripts automate daily tasks such as pricing source changes, market sector adjustments, user entitlements, etc. Used multiprocessing approaches for performance improvements.

♦ Refactored former legacy market data application written in Java. Improved performance by adding thread pool support and removed duplicated code.

♦ Developed a FI post trade workflow that connects ICAP with Bloomberg TOMS using C++ and Linux. This a cost effective in house solution that replaces a costly vendor solution currently in use.

♦ Assisted traders and sales with general tasks including client enablement, support of third-party applications, communication with vendors, ad-hoc reports and compliance related tasks.

Bank of America, CHICAGO, ILLINOIS
**Senior Software Developer,** 2011 to 2015
Committed to architect and develop a system (Carbon Swift) that enables Swift communication between the Bank and it's Collateral Custodians. An initiative that is needed as part of the Dodd-Frank regulation requirements. Collaborated with other development teams, QA team and business partners to ensure the system satisfies the established goals. Developed a Liquidity Management Solution (Sentry) that helps the Front Office evaluating the risk for certain OTC Derivatives products. ***Project highlights include...***

♦ Developed in Python a background application that sends electronic faxes to Custodians as part of the Collateral Notification process.

♦ Architected Sentry, a Quartz/Winform application that provides real-time information of Initial Margin and Clearing for Swaps trading. Sentry connects to its datasources using ZeroMQ.

♦ Mentored junior developers and acted as the resource to go for the challenging tasks at the team.

♦ Provided assistance, direction and leadership regarding new initiatives at the bank such as the new generation of Global Trading Infrastructure based on Python.

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# EDUCATION AND CREDENTIALS

**MS in Information Technology** (**2009**) ◆ Northwestern University, Evanston, Illinois

**BS in Computer Science** (**2000**) ◆ Escuela Politécnica del Ejercito, Quito, Ecuador