JAYSON QUINDAO

SENIOR SYSTEMS & DATA OPS ENGINEER • LOW-LATENCY C++ / RUST / DISTRIBUTED INFRASTRUCTURE

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PROFESSIONAL SUMMARY

Systems & Data Infrastructure Engineer with 6+ years building low-latency runtimes, database engine internals, and high-concurrency game-service telemetry in **C/C++** and **Rust**. Active upstream contributor to **Qdrant Vector Database** (PR #11428 approved) resolving multi-point state transitions and exact facet invariants, and Turso's distributed SQLite engine (libSQL PR #2309) remediating C-FFI memory leaks via RAII pointer reclamation. Architect of native OS-level game telemetry sentries with Win32 process enumeration and HMAC-SHA256 packet authentication. Proven record monitoring multi-million-dollar real-time transaction pipelines at NCR Atleos and high-throughput biometric hardware controllers at Mentalix. Deep understanding of live-service game client performance, memory constraints, and high-scale data ops.

TECHNICAL COMPETENCIES

- **Languages & Runtimes:** Rust (Tokio, Serde, FFI / C-ABI, Unsafe Boundaries, RAII, Concurrency), Modern C/C++ (C++17/20, STL, Memory Management), Python, TypeScript, SQL, Bash.
- **Databases & Data Ops:** PostgreSQL, Qdrant Vector Engine, Distributed SQLite (libSQL/Turso), Redis, MongoDB, ETL Pipelines, Kafka/Event Streaming, Data Modeling.
- **Systems & Telemetry:** Win32 API (K32EnumProcesses, OpenProcess, Memory/Handle Tracking), Linux Kernel / POSIX Internals, Cryptographic HMAC-SHA256 Payload Signing, Replay Defense.
- **Platforms & Tooling:** Docker, GitHub Actions CI/CD, Stripe Webhook Infrastructure, Zero-Copy Serialization, Vitest, Cargo Test Harnesses, Git, Edge/Node.js.

UPSTREAM OPEN-SOURCE DATABASE & ENGINE CONTRIBUTIONS

QDRANT — Vector Search Engine Upstream Contributor **github.com/qdrant/qdrant/pull/11428**

Stack: Rust, Vector Index Internals, Embedded Edge Shard, Exact Facet Parity, Deterministic Regression Testing

- **Exact Facet Zero-Count Omission (PR #11428):** Resolved an open regression in Qdrant's embedded Edge shard (#11409) where exact facet calculations returned ghost hits with count: 0 following point mutations and deletions, violating query parity.
- **Collection Filtering & Verification:** Wrapped exact count retrieval in live positive-count filtering and authored regression test exact_facet_after_move() covering keyword indexes after point moves; fully approved by core maintainers.

TURSO / LIBSQL — Distributed SQLite Engine Contributor **github.com/tursodatabase/libsql/pull/2309**

Stack: Rust, C-FFI, SQLite Engine Internals, Arc/Box Memory Management, C-ABI Stability

- **C-FFI Memory Leak Remediation (PR #2309):** Diagnosed and resolved open memory leak in SQLite's update hook callback mechanism (#2295) where raw pointer user context persisted across connection termination.
- **RAII Safe Pointer Reclamation:** Implemented explicit context reclamation via Box::from_raw during connection teardown, preventing memory leaks while guaranteeing C-ABI stability across 28 automated test suites.

PROFESSIONAL EXPERIENCE

GG LOOP LLC — Founder & Principal Systems Architect **Nov 2023 – Present | Dallas, TX**

Stack: Rust, Modern C++, Win32 API, POSIX, Tokio, C-ABI FFI, Serde, WebSockets, Stripe API

- **High-Performance Game Telemetry Sentry:** Engineered zero-overhead native telemetry sentry in Rust capturing OS-level process handles and execution states with sub-2ms latency and near-zero CPU/VRAM footprint during active 3D gameplay.
- **Memory Safety & Native FFI:** Structured unsafe Rust boundaries wrapping low-level Win32/POSIX APIs (K32EnumProcesses, OpenProcess), implementing RAII handle cleanup that eliminated memory leaks and crash vulnerabilities.
- **Cryptographic Packet Signing:** Engineered real-time cryptographic payload integrity checks generating HMAC-SHA256 signatures for telemetry packets with 5-minute replay window guards, preventing packet tampering and stream desynchronization.

NCR ATLEOS — Systems & Data Automation Engineer **Aug 2021 – Nov 2023 | Frisco, TX**

Stack: Python, SQL (PostgreSQL, T-SQL), Distributed Banking Hardware Telemetry, Network Monitoring

- **Distributed Hardware Telemetry:** Monitored and reconciled real-time transaction streams across national ATM hardware endpoints and banking network gateways, maintaining 99.9%+ availability across high-volume production clusters.
- **Automated Anomaly Detection:** Built automated data pipeline triage scripts that reduced discrepancy investigation cycle times by 40% across multi-tenant banking data feeds.

MENTALIX, INC. — Data Security & Systems Pipeline Engineer **Sep 2020 – Sep 2021 | Plano, TX**

Stack: C++, Python, Hardware-Software Interfacing, AES-256, CJIS/NIST Compliance

- **Hardware-Software Interfacing:** Developed high-volume biometric data capture pipelines interfacing directly with physical hardware scanning devices and peripheral controllers for enterprise and federal clients.
- **Embedded Security & Compliance:** Enforced hardware-level AES-256 encryption, strict RBAC, and CJIS standards on streaming biometric packets, increasing throughput by 25% while passing 100% of rigorous federal security audits.

EDUCATION & CITIZENSHIP

UNIVERSITY OF TEXAS AT ARLINGTON — Bachelor of Arts (Broadcasting / Digital Communications) **Arlington, TX**

Coursework in Digital Communications, Network Media Systems, and Telemetry. 73 credits transferred from TCC.

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