Aridsondez Jerome

workaridsondez@gmail.com | 954-588-9476 | linkedin.com/in/aridsondez-jerome | github.com/aridsondez

EDUCATION

University of Central Florida — Orlando, Florida
Bachelor of Science in Computer Science — Graduation: May 2026

- **Leadership**: Parliamentarian, National Society of Black Engineers (NSBE)
- **Relevant Coursework**: Data Structures & Algorithms, Distributed Systems, Databases, Operating Systems, Computer Architecture

EXPERIENCE

Software Engineer, Intern — May 2025 - August 2025
NextEra Energy x Everbright — *San Francisco, CA*

- Architected and shipped "Solar Year in Review" analytics pipeline serving **30,000+ users**, designing **Python Django** REST backend with **PostgreSQL** for time-series solar telemetry aggregation and AWS SQS for decoupled async job processing
- Owned end-to-end implementation of asynchronous task queue processing 12 months of per-customer telemetry data, optimizing batch queries and database indexing to achieve **3.2s p95 latency** and **99.9% uptime**
- Instrumented production systems with Datadog APM to expose critical path bottlenecks in Django ORM queries and background workers, reducing query execution time **from 8.5s to 2.1s** through materialized views and connection pooling

Co-Founder & Backend Engineer — January 2025 - Present
Luro (YC-track Startup) — *Orlando, FL*

- Built real-time AI Twitch assistant backend processing **10,000+ concurrent WebSocket connections**, architecting Node.js event loop for chat ingestion and FastAPI microservice for video transcription, embedding generation, and vector search
- Designed two-tier memory system combining PostgreSQL + pgvector for long-term semantic retrieval and Redis for session state and rate limiting, achieving **5s end-to-end query latency** through optimized cosine similarity search and hot-path caching
- Implemented streaming data pipeline with async Python workers summarizing 2-minute video segments via LLM, storing embeddings in pgvector index with **95% retrieval accuracy** on contextual queries

Data Engineer — August 2024 - January 2025
Jacobs — *Orlando, FL*

- Built Flask REST API exposing real-time sensor metrics from water filtration systems, designing normalized PostgreSQL schema and implementing row-level locking for concurrent writes from **3 engineering teams**
- Engineered C++ data validation pipeline processing **50,000+ sensor readings/hour**, implementing moving average filters and outlier detection with **98% precision**, reducing false positive alerts by 65%
- Optimized telemetry ingestion system to reduce diagnostic latency **from 45 minutes to 15 minutes**, redesigning database indexes and introducing time-series partitioning for historical data queries

PROJECTS

SQS-Lite (AWS SQS Clone) | *Go · PostgreSQL · Docker · Prometheus* — August 2025 – Present

- Designing distributed message queue in Go with PostgreSQL as persistence layer, implementing at-least-once delivery semantics through visibility timeout, exponential backoff retries, and dead-letter queue handling
- Built REST API for enqueue/dequeue/ack operations with PostgreSQL row-level locking and optimistic concurrency control, achieving **10,000+ msg/s throughput** through goroutine-based concurrent consumers and connection pooling
- Instrumented system with Prometheus for queue depth, processing rate, and DLQ metrics, implementing Docker health checks and auto-recovery to maintain **99.95% availability** under simulated failure scenarios

CortexSearch | *C++ · PostgreSQL · pgvector* — January 2025 - September 2025

- Built a semantic file search engine in C++ combining metadata filtering, full-text search, and vector similarity search to enable relevance-based retrieval across **100,000+ indexed documents**
- Integrated PostgreSQL full-text search with pgvector-based similarity queries, fusing keyword and embedding results to improve retrieval relevance by **35%** over keyword-only baselines
- Implemented a multithreaded producer–consumer pipeline for document ingestion and embedding generation, batching workloads to reduce average document processing time to **2.5s** per file
- Optimized query execution paths and indexing strategy to achieve **sub-200ms** top-k retrieval latency under local workloads

Satellite VPP | *Python · Flask · Solana · PostgreSQL* — Won Best Use of Solana — MDC Hackathon 2025

- Engineered event-driven Flask backend for decentralized energy trading, implementing dynamic pricing algorithm and Solana Devnet integration to process **500+ blockchain transactions/hour** with **sub-500ms** API latency
- Architected RESTful endpoints for real-time pricing updates across distributed network of **50+ nodes**, reducing average response time **from 200ms to 50ms** through async request handling and database query batching

TECHNICAL SKILLS

Languages: Go, Python, C++, C, SQL, JavaScript
Backend & Systems: Django, Flask, FastAPI, Node.js, PostgreSQL, Redis, MongoDB, SQLite, pgvector
Infrastructure & Tools: Docker, AWS (SQS, S3, EC2), Linux, Git, Prometheus, Datadog