

# OMOGHENE (JHENE) EKWEM

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## EDUCATION

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### M.S. in Applied Data Science

University of Southern California

**Key Curriculum:** Database Management, Data Visualization, Data Mining

Aug 2025 – Dec 2026 (Expected)

Los Angeles, CA

### B.S. in Computer Science and Business Administration

University of Southern California

**Key Curriculum:** Data Structures, Business Statistics, Computer Systems

Aug 2021 – May 2025

Los Angeles, CA

## SKILLS

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**Languages:** Python, SQL, JavaScript

**Frameworks & Libraries:** PySpark, Pandas, Boto3, D3.js, Matplotlib, DuckDB, dbt, Dagster

**Platforms & Infrastructures:** AWS (S3, DynamoDB, IoT Core, CloudWatch), Apache (Superset, Kafka), Docker, PostgreSQL, Airbyte

## EXPERIENCE

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### Software Development Engineer Intern

Dec 2025 – Mar 2026

SprintRay

Glendale, CA

- Executed two **PostgreSQL** table retrofits using **boto3** and **gzip** to extract log data from **DynamoDB** and **IoT Core**, **pandas** to transform/clean, and **psycopg2** to batch load from unlogged **Postgres** staging tables, enabling efficient and at scale revision/insertion of telemetry data.
- Delivered **Jupyter**-based analytics on several million rows of **IoT** telemetry + resin + **RayWare** Cloud data using **Python** (**Pandas**, **Matplotlib**), partnering with Product leadership to track product KPIs (global resin consumption, print completion rate) and deliver focused resin insights.
- Consolidated 2 siloed **Postgres** databases into a unified analytics platform by architecting an end-to-end **ELT** pipeline using **Airbyte** for ingestion, **dbt Core** + **DuckDB** for transformations, **Dagster** for orchestration, and **Apache Superset** for dashboards, processing 20k daily records for Product/Software teams.
- Utilized **CloudWatch** to investigate the **Device Telemetry Processor** **Lambda** function and discovered a logic issue in handling incomplete **MQTT** messages sent over **Amazon SNS**, refactoring the processor to include a fallback mechanism and fetch from the printer's device shadow document.

### IT/Web & Systems Developer Intern

Sep 2025 – Present

University of Southern California — Cultural Relations & University Events (CRUE)

Los Angeles, CA

- Collaborated with university software developers to refactor the **Event Registration System (ERS)** from synchronous to asynchronous **JavaScript** and moved key endpoints from client-side to server-side pagination to reduce page load times at campus scale (**70,000+** users).
- Implemented a symmetric cryptographic **MVC** architecture using **PHP** with environment-level **AES-256** encryption to manage sensitive **Salesforce** API credentials, ensuring passwords and security tokens remain encrypted at rest while decrypting in memory to facilitate automated event data syncing.

### IT Support Intern

Oct 2022 – Sep 2025

USC Credit Union

Los Angeles, CA

- Wrote 6 **PowerShell** automation scripts for **Intune** and **SCCM** application deployment and **OS** imaging, saving **IT** staff 7+ hours/week over a 3-year tenure.

## PROFESSIONAL INVOLVEMENT

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### Director of Software

USC Flavors

- Led a 3-person development team in building a web platform (**Next.js**, **TypeScript**) for the over 200 member food club; managed sprint planning, delegated features, and shipped a **MVP** in 12 weeks.

### Co-Founder

AreaBoyzCollective LLC

- Co-created an event management company, generating **\$10K+** revenue in 18 months, managing client relationships, marketing, and operations for 15+ successful events serving over 1,200 attendees across the greater Los Angeles area.

## PROJECTS

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### RT-Sessionizer

Distributed Web Traffic Sessionizer

[source](#)

- Built a distributed streaming data platform using **Docker Compose** to orchestrate **Apache Kafka** and **Spark** clusters, implementing an ingestion pipeline that persists raw high-throughput traffic into a partitioned **Parquet** data lake.
- Developed a **PySpark Structured Streaming** engine to execute stateful sessionization logic, utilizing **Event-Time** processing and dynamic **Watermarking** to accurately aggregate out-of-order clickstream events into distinct user sessions for downstream analytics (Silver Layer).

### PyQL

Data Processing Engine

[demo](#)

- Engineered a **Python** data processing engine with a custom **CSV** parser (char streaming, type conversion), column-oriented dataframe architecture (dict mapping columns → lists), and **SQL**-like filtering, projection, and groupby rendered in an aesthetically minimalist and lightweight **Flask** web interface.

### Youtube to Media Converter

Raycast Extension

[source](#)

- Produced a **Raycast** extension that converts **YouTube** URLs into downloadable **.mp3/.mp4** using **Node.js**, **yt-dlp**, and **FFmpeg**; added auto clipboard loading and progress/ETA feedback for a smoother conversion workflow.