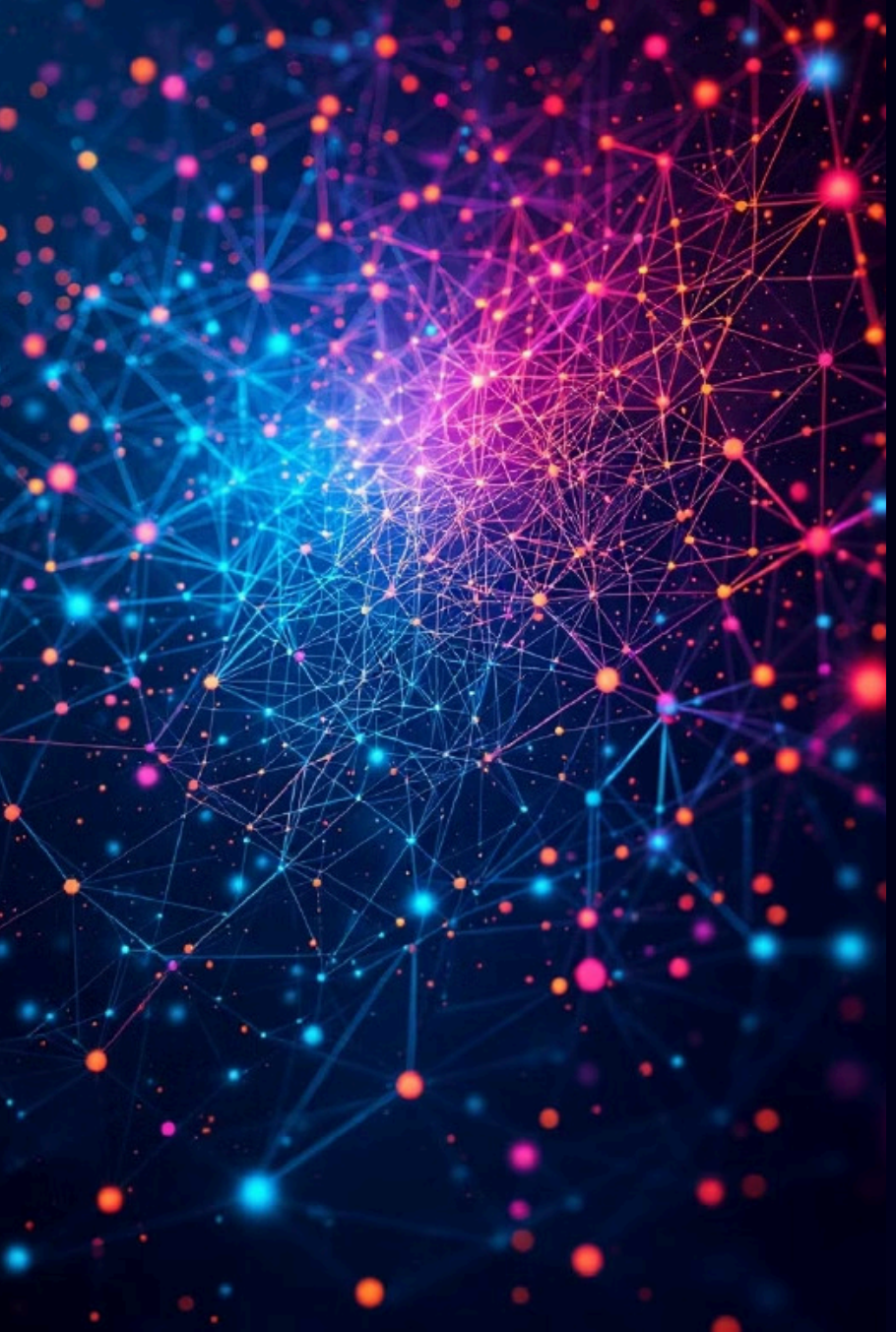


Automation Workflow

Fully Serverless & Event-Driven

Everything is event-triggered, eliminating the need for manual execution.

Event-Driven Architecture

1

AWS EventBridge Scheduler

Triggers data fetching automatically.

2

Lambda Function (Fetching Layer)

Retrieves external data (Google Drive / APIs).

3

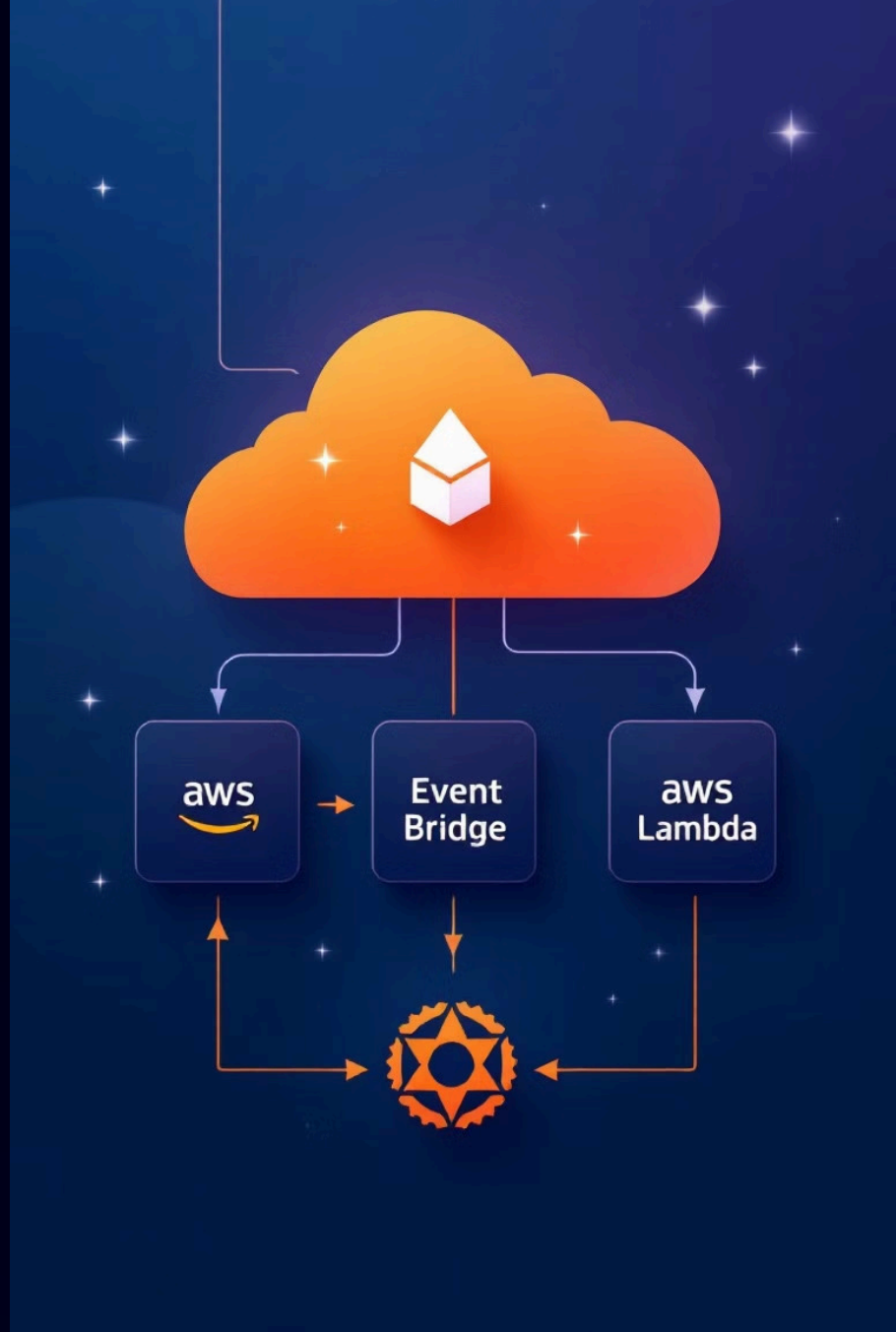
AWS S3 (RawData Bucket)

Stores incoming raw files.

4

S3 Event Notifications

Triggers cleaning, analysis, and dashboard updates.



Processing & Analysis Layers

Cleaning Lambda

Standardizes and preps the data.

Analysis Lambda

Generates procurement insights.

Dashboard Lambda

Creates interactive reports.

AWS S3 (Processed Data & Static Dashboards) → Stores final outputs.

Cloud-Hosted Streamlit App

1. Deployed via GitHub Actions & AWS (Lambda)
2. Automatically fetches processed data from S3
3. Real-time dashboard powered by Streamlit-ECharts
4. Available 24/7 with GitHub-driven updates

100% automation achieved from data ingestion to dashboard generation

https://radutech.streamlit.app/

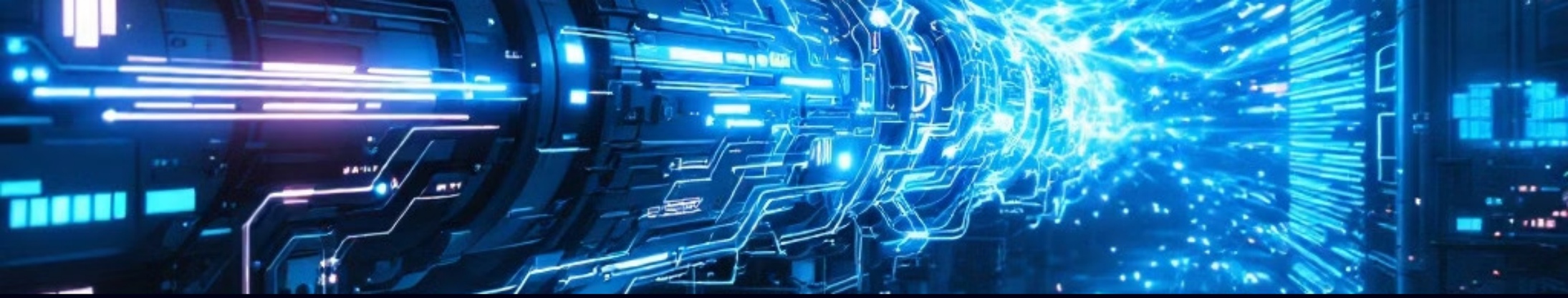
NB: Refresh button & AWS Data retrival disabled to keep my AWS costs low.

S3 Bucket Structure

- proc.data//
- ArchiveData/
- CleanData/
- ProcessedData/
- RawData/
- config/

Lambda Functions

Sequence	Scope	Function Name
1	Gdrive data fetching & loading to AWS S3	fetch_gdrive_to_s3
2	Data pre-process & cleaning	layer_script_1_clean_lambda
3	Data analysis	script_2_analysis_lambda
4	Dashboard generation	script_3_dashboard_lambda



Event Triggers

Retrieves external data (Google Drive / APIs)

1

Sequence: 1

Trigger: data_fetching_script0

Type: EventBridge/Scheduler

Cleaning & Structuring Data

2

Sequence: 2

Trigger: trigger_cleaning_lambda

Type: AWS S3 Event Notification

Data Analysis

3

Sequence: 3

Trigger: trigger_analysis_lambda

Type: AWS S3 Event Notification

Dashboard Generation

4

Sequence: 4

Trigger: trigger_dashboard_lambda

Type: AWS S3 Event Notification

GitHub Repository Structure

.devcontainer

.workflow.main

.streamlit.config

app.py

requirements.txt

Streamlit App for Live Procurement Dashboard

- AWS S3 Data Integration for Data Retrieval
- Data Processing and Visualization using Pandas
- Interactive ECharts-based Visualizations
- GitHub Actions for Workflow Automation

https://github.com/leonright-tech/dash.git