BRIAN GWAYI

About Me

Background in Data Engineering
Working with data from 2017
Experience in banking industry

Foundation First !!!

Four Key Questions

I. Where do we consolidate our data ? > Storage

II. How will we get it there ? > Ingestion

III. How will we clean it up? > Transformation

IV. How will we analyze it? > Reporting

Data Stack

Popular Options

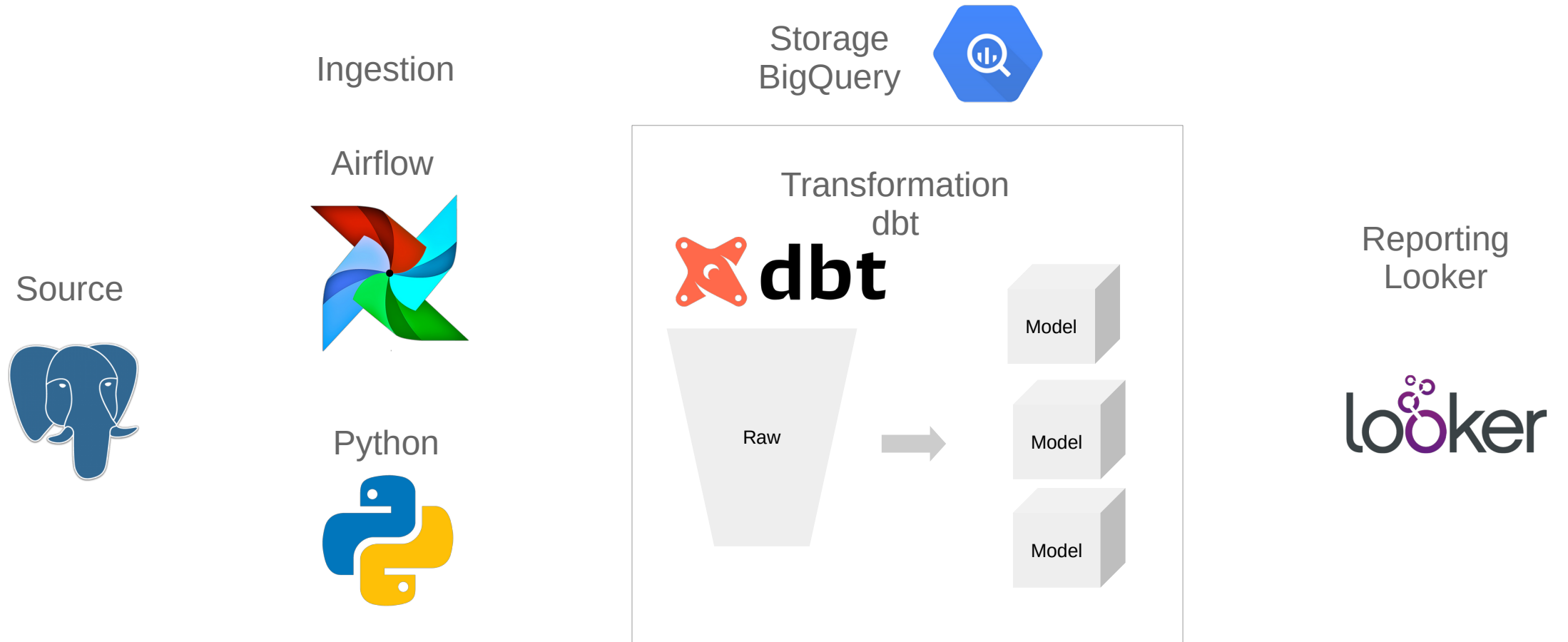Storage > Snowflake, <u>BigQuery</u>, <u>s3</u>, Redshift
Ingestion > Airbyte, <u>Airflow</u>, Fivetran
Transformation > <u>dbt</u>
Reporting > Tableau, Power BI, <u>Looker</u>, Superset

Architecture Design

Ingestion

Storage
BigQuery

Source

Airflow

Transformation
dbt

Reporting
Looker

Python

Raw

Model

Model

Model

Project : E-commerce

01

Storage/Database
Setting Google BigQuery

02

Ingestion
Setting up Apache Airflow
Writing elt Python script
Orchestrate data pipeline

03

Transformation
Setting up dbt
Transformation

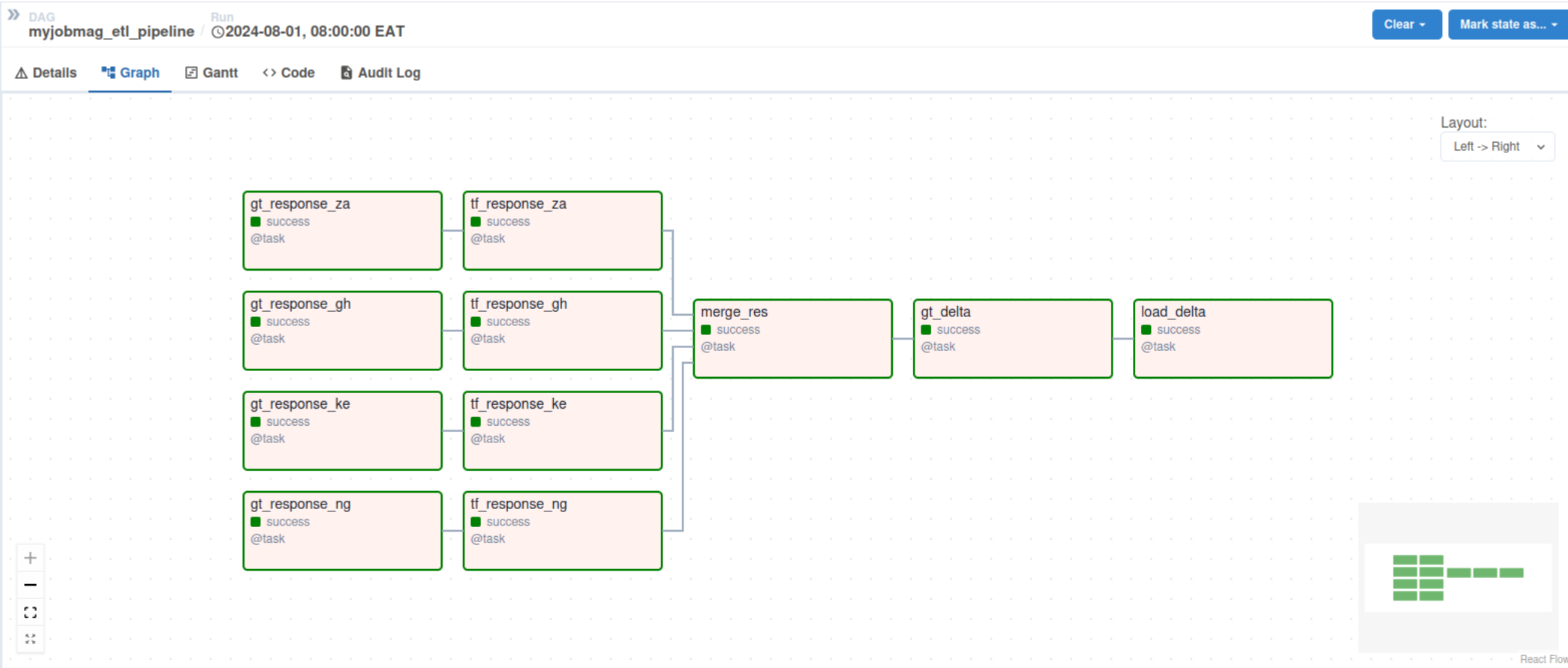**04**

Reporting
Connecting Looker

DAG: myjobmag_etl_pipeline

Schedule: 1:00:00 | Next Run ID: 2024-08-01, 08:00:00 EAT | ▶ | 🗑

08 / 01 / 2024 📅 08 : 31 : 58 AM | All Run Types ▾ | All Run States ▾ | Clear Filters | Auto-refresh ⬤ | 25 ▾

Press shift + / for Shortcuts

deferred | failed | queued | removed | restarting | running | scheduled | shutdown | skipped | success | up_for_reschedule | up_for_retry | upstream_failed | no_status

DAG myjobmag_etl_pipeline / Run ⏱2024-08-01, 08:00:00 EAT

Clear ▾ | Mark state as... ▾

⚠ Details | 🔲 Graph | 📊 Gantt | <> Code | 📄 Audit Log

Duration
00:01:01
00:00:30
00:00:00

Aug 01, 00:44

gt_response_ke
tf_response_ke
gt_response_gh
tf_response_gh
gt_response_za
tf_response_za
gt_response_ng
tf_response_ng
merge_res
gt_delta
load_delta

Layout:
Left -> Right ▾

gt_response_za
■ success
@task

tf_response_za
■ success
@task

gt_response_gh
■ success
@task

tf_response_gh
■ success
@task

merge_res
■ success
@task

gt_delta
■ success
@task

load_delta
■ success
@task

gt_response_ke
■ success
@task

tf_response_ke
■ success
@task

gt_response_ng
■ success
@task

tf_response_ng
■ success
@task

+
−
⛶
⛶

React Flow

pgAdmin 4

File Object Tools Help

Object Explorer

Dashboard | Statistics | Dependents | Processes | listing_db/postgre… | listing_db/postgre… | listing_db/postgre… | listing_db/postgres@localhost*

listing_db/postgres@localhost

No limit

Data Output | Messages | Notifications

- Catalogs
- Event Triggers
- Extensions
- Foreign Data Wrappers
- Languages
- Publications
- Schemas (1)
  - public
    - Aggregates
    - Collations
    - Domains
    - FTS Configurations
    - FTS Dictionaries
    - FTS Parsers
    - FTS Templates
    - Foreign Tables
    - Functions
    - Materialized Views
    - Operators
    - Procedures (2)
    - Sequences
    - Tables (1)
      - jb_listing
        - Columns (16)
        - Constraints
        - Indexes
        - RLS Policies
        - Rules
        - Triggers
    - Trigger Functions
    - Types
    - Views
- Subscriptions
- postgres
- Login/Group Roles (16)
  - airflow_user
  - pg_checkpoint
  - pg_create_subscription
  - pg_database_owner

	jid [PK] integer	pubdate date	expirydate date	jp text	company text	experience text	studies text	industry text
1	765442	2024-07-30	2024-08-05	Intern VOIP Engineer	Dial Afrika	- years	BA/BSc/HND	ICT / Telecon
2	765434	2024-07-30	2024-08-31	Enterprise-Wide Risk Management Officer	Trade and Development Bank (TDB)	5 - 8 years	BA/BSc/HND , MBA/MSc/MA	Banking / Fin
3	765417	2024-07-30	[null]	Project Finance Administrator	PATH	5 - years	BA/BSc/HND , MBA/MSc/MA	Healthcare /
4	765416	2024-07-30	[null]	Legal Manager - Commercial	Equity Bank Kenya	8 - 10 years	BA/BSc/HND , Diploma	Banking / Fin
5	765415	2024-07-30	[null]	Administrative Assistant, Tatu Girls School	Nova Pioneer	2 - 3 years	BA/BSc/HND , Diploma	Education / T
6	765414	2024-07-30	[null]	History/ CRE Teacher (Eldoret Girls School)	Nova Pioneer	3 - years	BA/BSc/HND	Education / T
7	765413	2024-07-30	2024-08-13	Compliance Officer	African Wildlife Foundation	5 - years	BA/BSc/HND	Travel and To
8	765412	2024-07-30	2024-08-05	Pharmaceutical Technologist - Juja	Equity Afia	3 - years	Diploma	Healthcare /
9	765411	2024-07-30	2024-08-05	Pharmaceutical Technologist - Ruiru	Equity Afia	3 - years	Diploma	Healthcare /
10	765408	2024-07-30	2024-08-06	SNE Assistant Officer	Finn Church Aid (FCA)	4 - years	BA/BSc/HND , Diploma	NGO / Non-P
11	765406	2024-07-30	2024-08-12	Private Sector Officer	International Organization for Migration (IOM)	5 - years	BA/BSc/HND , MBA/MSc/MA	NGO / Non-P
12	765389	2024-07-30	2024-08-13	Internship Programme	Turkana County Government	- years	BA/BSc/HND , Diploma	Government
13	765388	2024-07-30	2024-08-11	Sales & Marketing Executive	InspiraFarms	3 - years	BA/BSc/HND	Agriculture /
14	765383	2024-07-30	[null]	Community Service Assistant	Evidence Action	1 - 2 years	BA/BSc/HND , KCSE	NGO / Non-P
15	765379	2024-07-30	2024-08-02	Business Manager	MAL Consultancy	10 - years	BA/BSc/HND , MBA/MSc/MA	Consulting
16	765364	2024-07-30	2024-08-13	Sustainable Livelihoods Officer	Shining Hope For Communities	5 - years	BA/BSc/HND	Consulting
17	765363	2024-07-30	[null]	Learning & Leadership Development Manager	CARE	3 - 5 years	BA/BSc/HND , MBA/MSc/MA	NGO / Non-P
18	765357	2024-07-30	2024-08-15	Key Account Sales Executive	M-Paya	- years	BA/BSc/HND	ICT / Telecon
19	765346	2024-07-30	2024-08-06	Graduate Assistant	Strathmore Business School	- years	BA/BSc/HND	Education / T
20	765342	2024-07-30	[null]	CHP Officer	International Rescue Committee	3 - 6 years	BA/BSc/HND , Diploma	NGO / Non-P
21	765341	2024-07-30	[null]	Finance Officer	International Rescue Committee	3 - years	BA/BSc/HND	NGO / Non-P
22	765326	2024-07-30	[null]	Formulator	ADM	7 - years	BA/BSc/HND	Agriculture /
23	765313	2024-07-30	2024-08-12	Deputy Regional Health Assessment Programme Coordinator	International Organization for Migration (IOM)	7 - 9 years	BA/BSc/HND	NGO / Non-P
24	765303	2024-07-30	2024-08-02	Business Development Manager - Bancassurance	Kingdom Bank Limited	5 - years	BA/BSc/HND	Banking / Fin
25	765296	2024-07-30	2024-08-10	Medical Officer Intern	Avenue Healthcare	- years	BA/BSc/HND	Healthcare /
26	765292	2024-07-30	[null]	Business Development Leader	Visa	12 - years	BA/BSc/HND , MBA/MSc/MA , PhD/Fellowship	Banking / Fin
27	765288	2024-07-30	2024-08-12	Resource Mobilizer	International Transformation Foundation (ITF)	- years	BA/BSc/HND , Diploma	NGO / Non-P
28	765283	2024-07-30	[null]	HR Officer - Performance & Development	Frank Management Consult Ltd	5 - years	BA/BSc/HND	Consulting
29	765282	2024-07-30	[null]	Talent Acquisition Officer	Frank Management Consult Ltd	5 - years	BA/BSc/HND	Consulting
30	765280	2024-07-30	2024-08-16	Human Resources Manager	Rural Agency for Community Development and Assistance (RACID...	5 - years	BA/BSc/HND , MBA/MSc/MA	NGO / Non-P