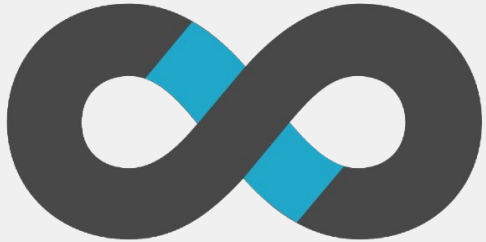


Apache

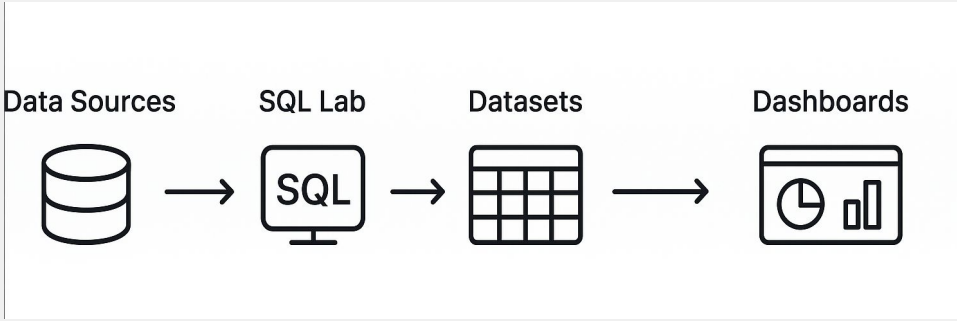
Superset™

What is Apache Superset?

- Open-source BI platform for data exploration & visualization
- Created at Airbnb, now Apache top-level project
- Fast, cloud-native, SQL-first architecture
- Modern alternative to Tableau / Looker / Power BI
- Supports dashboards, charts, and self-service analytics

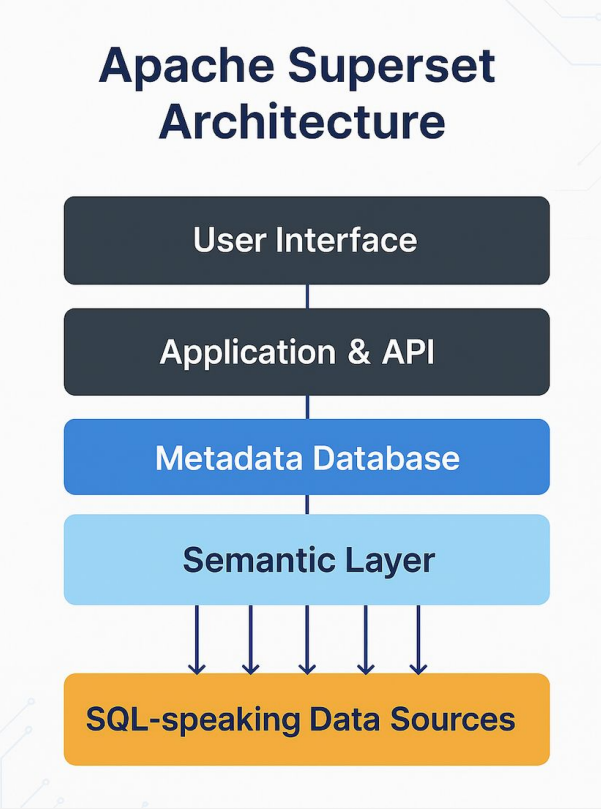
How Superset Works

- Connect to any SQL-speaking database
- Explore data with SQL Lab
- Save queries as datasets
- Build charts visually (no code required)
- Combine charts into interactive dashboards



Architecture

- React Web UI for dashboards & charts
- Python API backend (Flask + Gunicorn)
- Metadata stored in PostgreSQL/MySQL
- Redis for caching and async tasks
- Celery workers for long-running operations
- Stateless → easy to scale horizontally



Use Cases

Self-service analytics for product, marketing, finance

Operational dashboards for KPIs and business monitoring

SQL-based data exploration

Lightweight semantic layer: metrics, calculated fields

Strong governance: RBAC & row-level security

Trade Offs

Pros

- Free and open-source (no licenses)
- Fast and scalable in cloud-native environments
- Wide variety of chart types
- SQL-first approach loved by analysts
- Easy integration (OAuth, SSO, 40+ connectors)

Cons

- UI is less polished than Tableau
- No LookML-like semantic layer
- Heavy reliance on SQL
- Permission model can be complex
- Not ideal for large-scale enterprise governance

Comparison

Superset (Open-source) 	Best cost-efficiency Flexible, SQL-first Cloud-native, no vendor lock-in
Looker (Enterprise) 	Strong semantic layer (LookML) Governance-oriented Expensive, requires specialists
Tableau (Enterprise) 	Best UI & storytelling visuals Desktop-first workflow High licensing cost
Power BI (Microsoft) 	Excellent inside Microsoft ecosystem Friendly for Excel users Limited for multi-cloud or big data

Live Demo

Thank you

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