8 Apache Superset vs Metabase

8.1 Data Sources

Category	Metabase	Apache Superset
SQL databases & engines	16	43
NoSQL databases	1 (MongoDB)	0 (possible through Trino / Presto)

Table 1: Comparison of Data Sources in Metabase and Superset

8.2 No-code Query Builder

Feature	Metabase	Superset
Support common SQL operations (Select, Filter, GroupBy, etc)	✓	✓
Preview visualization during iteration	✓	✓
Preview generated SQL query during iteration	✓	✓
View data transformation results as a table	✓	✓
Use virtual datasets to build charts	✓	✓
Ability to join tables	✓	✓

Table 2: No-code Query Builder Comparison: Metabase vs Superset

8.3 Visualization Features

Feature	Metabase	Superset
Common charts (pie, line, bar, etc)	✓	✓
Funnel visualizations	✓	✓
Sankey diagrams	✗	✓
Network visualization	✗	✓
Clear documentation on adding your own visualizations	✗	✓
Number of default charts	17	62 (and growing)
Number of geospatial visualizations	3	10
Configuration options (e.g., tooltips, colors)	Limited	Robust
Custom charts (via plugins)	✗	✓

Table 3: Visualization Features Comparison: Metabase vs Superset

8.4 Advanced SQL Editor

Feature	Metabase	Superset
Export query results as CSV	✓	✓
Database metadata explorer	✓	✓
Linting and auto-complete	✓	✓
Support for variables in SQL queries	✓	✓
Multi-tab workflow	✓	✓
Save query for re-use	✓	✓
Semantic layer: save queries as virtual datasets	✓	✓
Semantic layer: define custom metrics	✓	✓
Semantic layer: calculated columns	✓	✓

Table 4: Advanced SQL Editor Features Comparison between Metabase and Superset

Both Metabase and Superset ship with a powerful SQL editor and a lightweight semantic layer.

- Aggregate values across multiple columns and publish as **Metrics**.
- Metrics can be certified as authoritative by a specific user.
- Transform specific columns and publish as **Calculated Columns**.
- Write arbitrary SQL queries and publish as a **Virtual Dataset**.

In the no-code chart builder (**Explore**), metrics, columns, and virtual datasets all inherit the power that physical database tables have in Superset.

Feature	Metabase	Superset
Basic datetime, value, and range filters	✓	✓
Dashboard templating	✓	✓
Custom theming	✓	✓
Dashboard can contain charts from multiple data sources	✓	✓
Cross-filtering	✓	✓
Data drilling (drill-down, drill by)	✓	✓
Organization and configuration	Limited	Robust

Table 5: Feature Comparison between Metabase and Superset

9 Conclusion and Recommendation

Apache Superset and Metabase are both powerful open-source Business Intelligence (BI) tools, but they cater to different users. Superset is ideal for technical teams needing advanced analytics, complex visualizations, and security, making it best suited for data engineers and analysts. Metabase, on the other hand, is user-friendly and suitable for quick insights, perfect for smaller businesses or non-technical teams.

Recommendation

Choose Superset if you need flexibility, scalability, and advanced visualizations; choose Metabase if you want an accessible, no-fuss BI tool for fast insights.

Best Use Cases

- **Apache Superset:**
  - **Enterprise Analytics:** Ideal for large organizations needing in-depth analysis across multiple departments.
  - **Geospatial Insights:** Great for companies needing location-based data, such