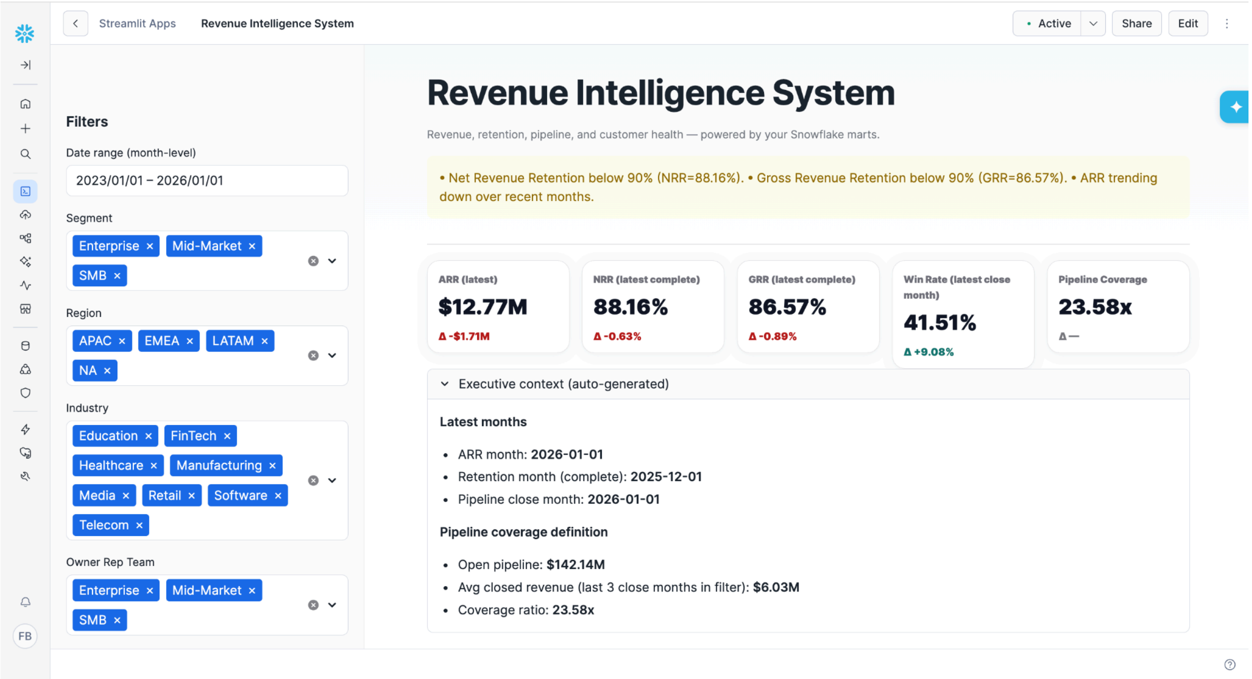
Revenue Intelligence System

I built a Snowflake-native Revenue Intelligence application that models RAW operational data into curated MARTS fact tables, defines governed GTM metrics (ARR from MRR, cohort-based NRR/GRR with boundary-month safeguards, win rate, and pipeline coverage), and embeds lightweight data quality checks to ensure interpretability. On top of this foundation, I implemented a reusable semantic layer and validated lineage and dependencies in Snowsight to reinforce metric governance. I then integrated Snowflake Cortex (AI_COMPLETE) to generate a board-ready executive narrative and a strict, evidence-grounded Analyst Q&A experience with confidence scoring, ensuring AI outputs remain fully tied to governed data. The result is an end-to-end, AI-ready analytics system that demonstrates semantic modeling, observability, and responsible AI usage directly within the Snowflake platform.

Github Link: https://github.com/bhoomikaa/gtm-revenue-copilot

Deployed a Streamlit app inside Snowflake for exec + GTM analytics.



Revenue Intelligence System

Revenue, retention, pipeline, and customer health — powered by your Snowflake marts.

• Net Revenue Retention below 90% (NRR=88.16%). • Gross Revenue Retention below 90% (GRR=86.57%). • ARR trending down over recent months.

Filters

Date range (month-level): 2023/01/01 – 2026/01/01

Segment: Enterprise ×, Mid-Market ×, SMB ×

Region: APAC ×, EMEA ×, LATAM ×, NA ×

Industry: Education ×, FinTech ×, Healthcare ×, Manufacturing ×, Media ×, Retail ×, Software ×, Telecom ×

Owner Rep Team: Enterprise ×, Mid-Market ×, SMB ×

ARR (latest)	NRR (latest complete)	GRR (latest complete)	Win Rate (latest close month)	Pipeline Coverage
$12.77M	88.16%	86.57%	41.51%	23.58x
Δ -$1.71M	Δ -0.63%	Δ -0.89%	Δ +9.08%	Δ —

Executive context (auto-generated)

Latest months

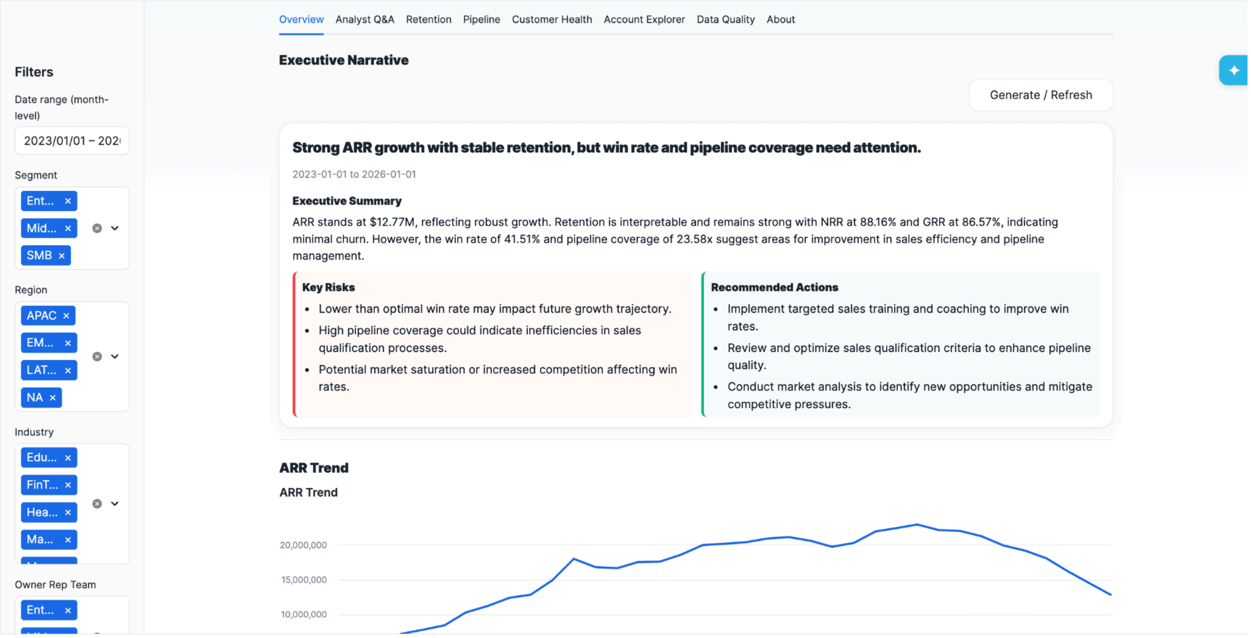
- ARR month: **2026-01-01**
- Retention month (complete): **2025-12-01**
- Pipeline close month: **2026-01-01**

Pipeline coverage definition

- Open pipeline: **$142.14M**
- Avg closed revenue (last 3 close months in filter): **$6.03M**
- Coverage ratio: **23.58x**

FEATURES:

Board-ready executive summary combining governed ARR, retention, win rate, and pipeline coverage metrics with Cortex-generated narrative grounded in Snowflake MARTS data.



Filters

Date range (month-level)

2023/01/01 – 202

Segment

Ent... × Mid... × SMB ×

Region

APAC × EM... × LAT... × NA ×

Industry

Edu... × FinT... × Hea... × Ma... ×

Owner Rep Team

Ent... ×

Executive Narrative

Strong ARR growth with stable retention, but win rate and pipeline coverage need attention.

2023-01-01 to 2026-01-01

Executive Summary

ARR stands at $12.77M, reflecting robust growth. Retention is interpretable and remains strong with NRR at 88.16% and GRR at 86.57%, indicating minimal churn. However, the win rate of 41.51% and pipeline coverage of 23.58x suggest areas for improvement in sales efficiency and pipeline management.

Key Risks

- Lower than optimal win rate may impact future growth trajectory.
- High pipeline coverage could indicate inefficiencies in sales qualification processes.
- Potential market saturation or increased competition affecting win rates.

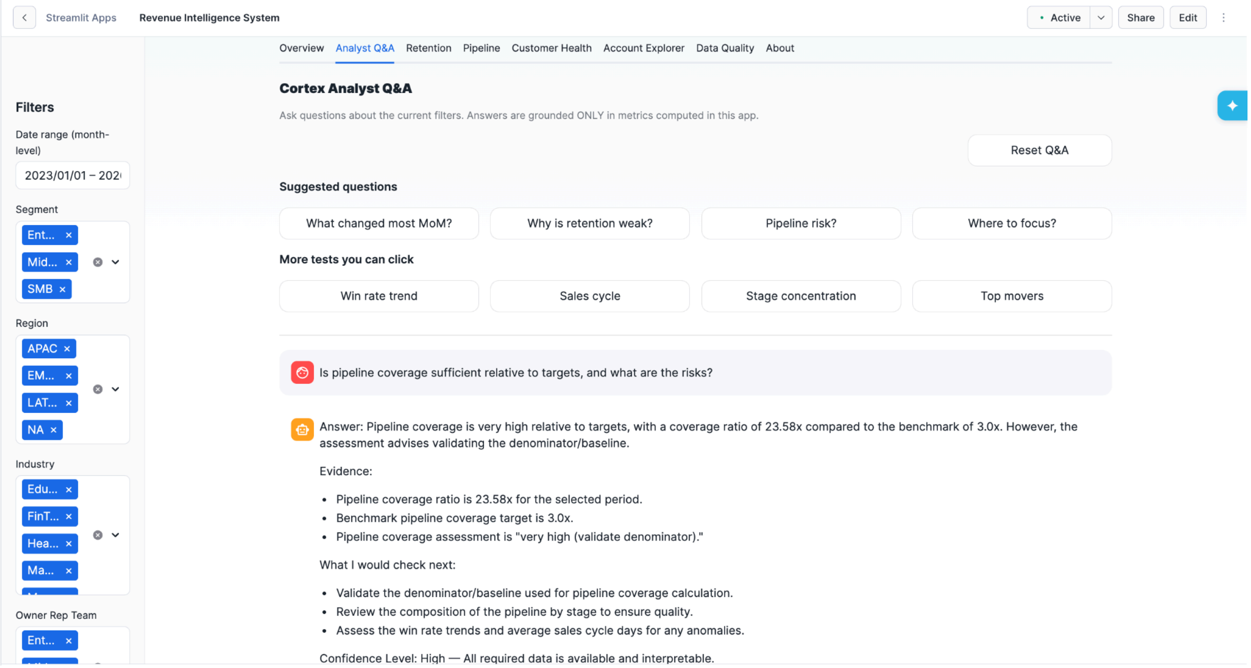
Recommended Actions

- Implement targeted sales training and coaching to improve win rates.
- Review and optimize sales qualification criteria to enhance pipeline quality.
- Conduct market analysis to identify new opportunities and mitigate competitive pressures.

ARR Trend

ARR Trend

Cortex-powered, strictly grounded analytics assistant that answers GTM questions using a governed JSON data pack with evidence bullets and confidence scoring.



Filters

Date range (month-level)

2023/01/01 – 202

Segment

Ent... × Mid... × SMB ×

Region

APAC × EM... × LAT... × NA ×

Industry

Edu... × FinT... × Hea... × Ma... ×

Owner Rep Team

Ent... ×

Cortex Analyst Q&A

Ask questions about the current filters. Answers are grounded ONLY in metrics computed in this app.

Suggested questions

More tests you can click

Is pipeline coverage sufficient relative to targets, and what are the risks?

Answer: Pipeline coverage is very high relative to targets, with a coverage ratio of 23.58x compared to the benchmark of 3.0x. However, the assessment advises validating the denominator/baseline.

Evidence:

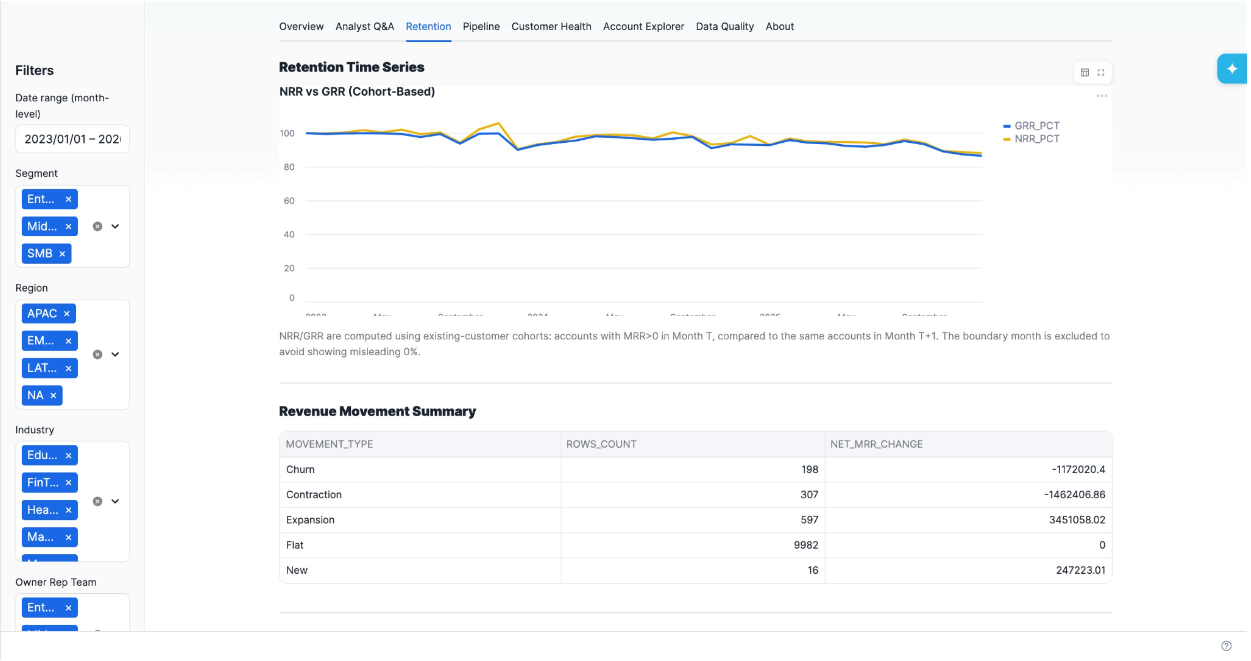
- Pipeline coverage ratio is 23.58x for the selected period.
- Benchmark pipeline coverage target is 3.0x.
- Pipeline coverage assessment is "very high (validate denominator)."

What I would check next:

- Validate the denominator/baseline used for pipeline coverage calculation.
- Review the composition of the pipeline by stage to ensure quality.
- Assess the win rate trends and average sales cycle days for any anomalies.

Confidence Level: High — All required data is available and interpretable.

Cohort-based NRR/GRR analysis with boundary-month safeguards, plus MRR movement breakdown (expansion, contraction, churn) built directly from curated fact tables.



Filters

Date range (month-level)

2023/01/01 – 202

Segment

Ent... ×
Mid... ×
SMB ×

Region

APAC ×
EM... ×
LAT... ×
NA ×

Industry

Edu... ×
FinT... ×
Hea... ×
Ma... ×

Owner Rep Team

Ent... ×

Retention Time Series

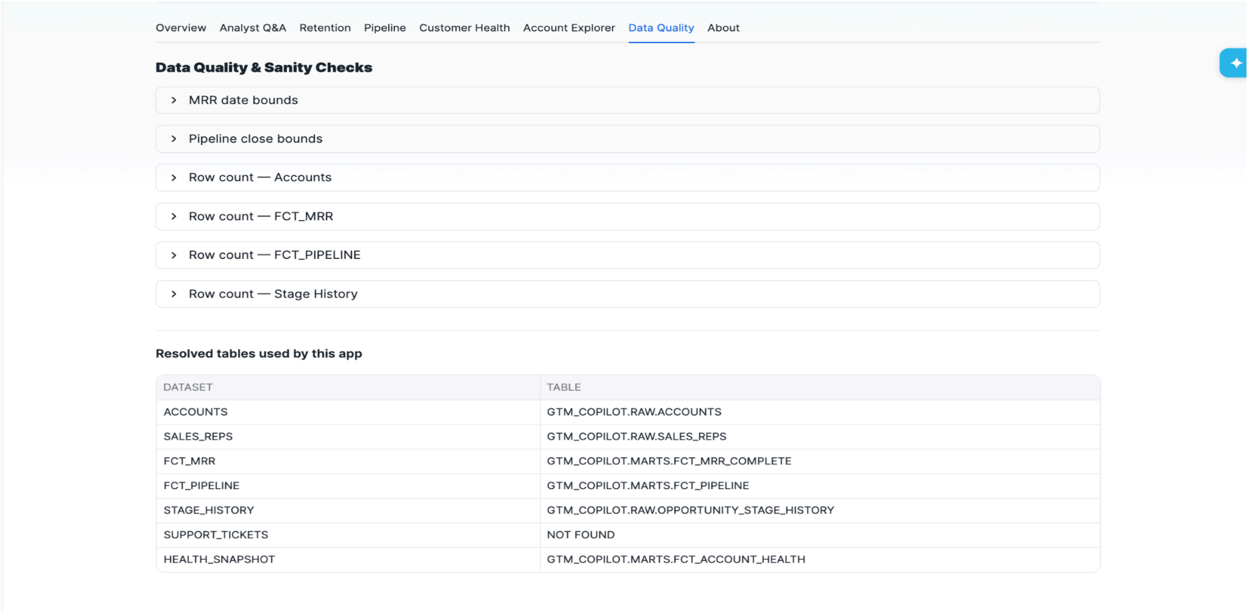
NRR vs GRR (Cohort-Based)

NRR/GRR are computed using existing-customer cohorts: accounts with MRR>0 in Month T, compared to the same accounts in Month T+1. The boundary month is excluded to avoid showing misleading 0%.

Revenue Movement Summary

MOVEMENT_TYPE	ROWS_COUNT	NET_MRR_CHANGE
Churn	198	-1172020.4
Contraction	307	-1462406.86
Expansion	597	3451058.02
Flat	9982	0
New	16	247223.01

Lightweight observability layer showing date bounds, row counts, and sanity checks to validate data completeness and metric reliability.



Data Quality & Sanity Checks

› MRR date bounds

› Pipeline close bounds

› Row count — Accounts

› Row count — FCT_MRR

› Row count — FCT_PIPELINE

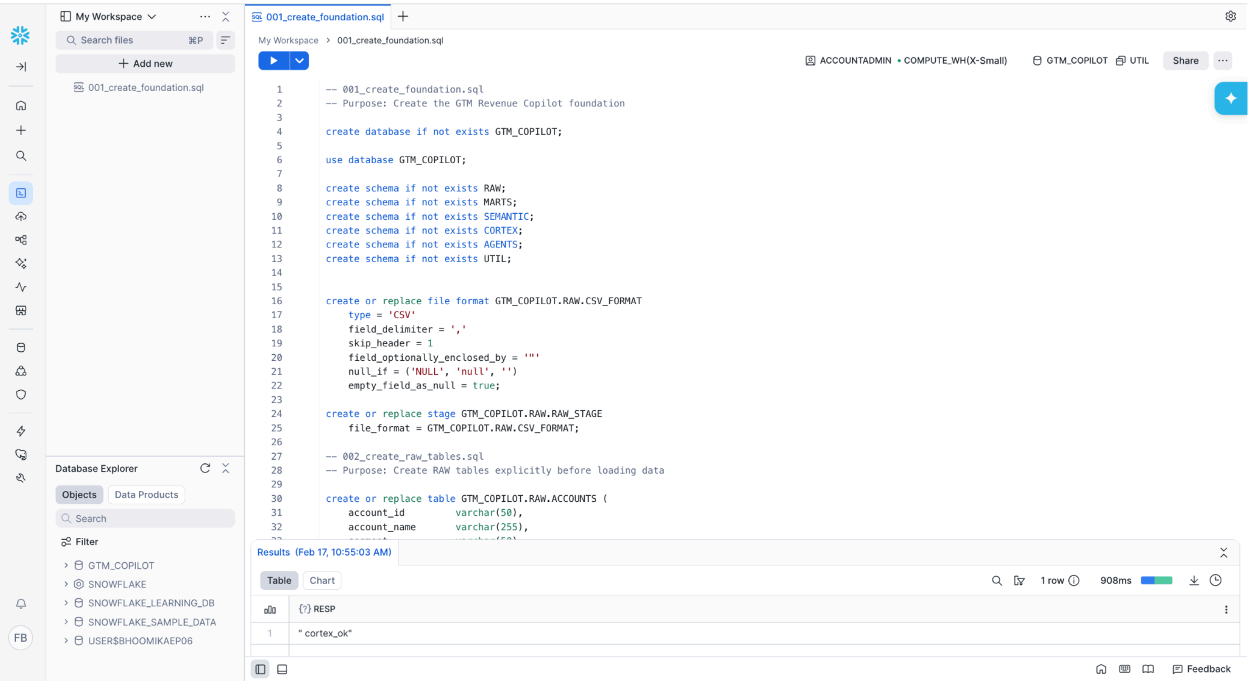
› Row count — Stage History

Resolved tables used by this app

DATASET	TABLE
ACCOUNTS	GTM_COPILOT.RAW.ACCOUNTS
SALES_REPS	GTM_COPILOT.RAW.SALES_REPS
FCT_MRR	GTM_COPILOT.MARTS.FCT_MRR_COMPLETE
FCT_PIPELINE	GTM_COPILOT.MARTS.FCT_PIPELINE
STAGE_HISTORY	GTM_COPILOT.RAW.OPPORTUNITY_STAGE_HISTORY
SUPPORT_TICKETS	NOT FOUND
HEALTH_SNAPSHOT	GTM_COPILOT.MARTS.FCT_ACCOUNT_HEALTH

FLOW:

1)Running analytics workloads with RBAC and warehouse-managed compute in Snowsight.

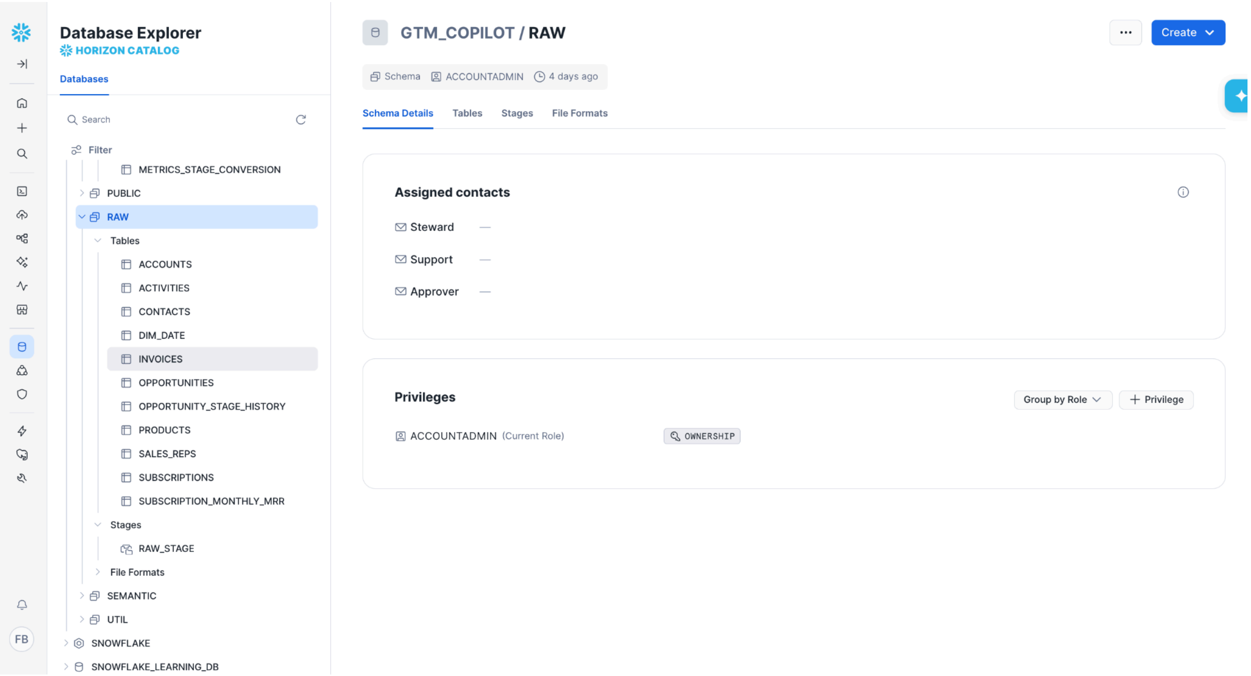


```sql
-- 001_create_foundation.sql
-- Purpose: Create the GTM Revenue Copilot foundation

create database if not exists GTM_COPILOT;

use database GTM_COPILOT;

create schema if not exists RAW;
create schema if not exists MARTS;
create schema if not exists SEMANTIC;
create schema if not exists CORTEX;
create schema if not exists AGENTS;
create schema if not exists UTIL;


create or replace file format GTM_COPILOT.RAW.CSV_FORMAT
    type = 'CSV'
    field_delimiter = ','
    skip_header = 1
    field_optionally_enclosed_by = '"'
    null_if = ('NULL', 'null', '')
    empty_field_as_null = true;

create or replace stage GTM_COPILOT.RAW.RAW_STAGE
    file_format = GTM_COPILOT.RAW.CSV_FORMAT;

-- 002_create_raw_tables.sql
-- Purpose: Create RAW tables explicitly before loading data

create or replace table GTM_COPILOT.RAW.ACCOUNTS (
    account_id         varchar(50),
    account_name       varchar(255),
```

Results (Feb 17, 10:55:03 AM)

	RESP
1	" cortex_ok"

2)Warehouse layering: RAW ingestion → MARTS curated facts for consistent metrics.



Assigned contacts

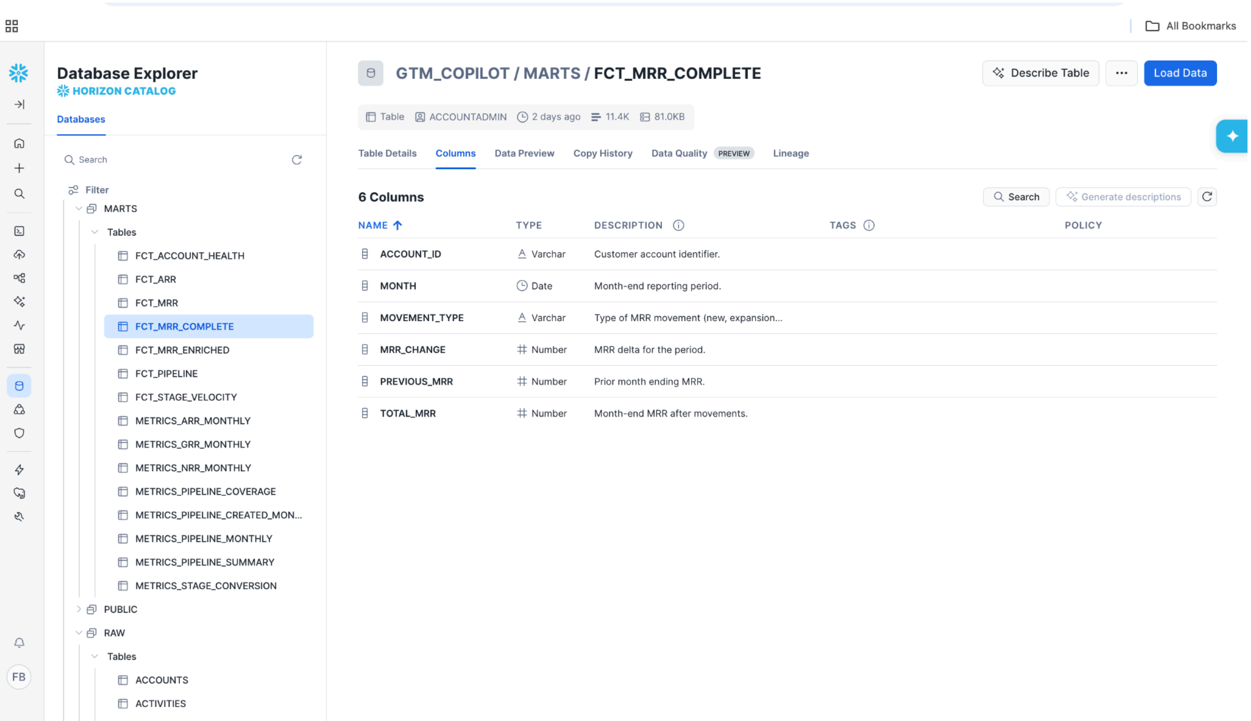
Steward —

Support —

Approver —

Privileges

ACCOUNTADMIN (Current Role) OWNERSHIP



- MARTS
  - Tables
    - FCT_ACCOUNT_HEALTH
    - FCT_ARR
    - FCT_MRR
    - FCT_MRR_COMPLETE
    - FCT_MRR_ENRICHED
    - FCT_PIPELINE
    - FCT_STAGE_VELOCITY
    - METRICS_ARR_MONTHLY
    - METRICS_GRR_MONTHLY
    - METRICS_NRR_MONTHLY
    - METRICS_PIPELINE_COVERAGE
    - METRICS_PIPELINE_CREATED_MON...
    - METRICS_PIPELINE_MONTHLY
    - METRICS_PIPELINE_SUMMARY
    - METRICS_STAGE_CONVERSION
- PUBLIC
- RAW
  - Tables
    - ACCOUNTS
    - ACTIVITIES

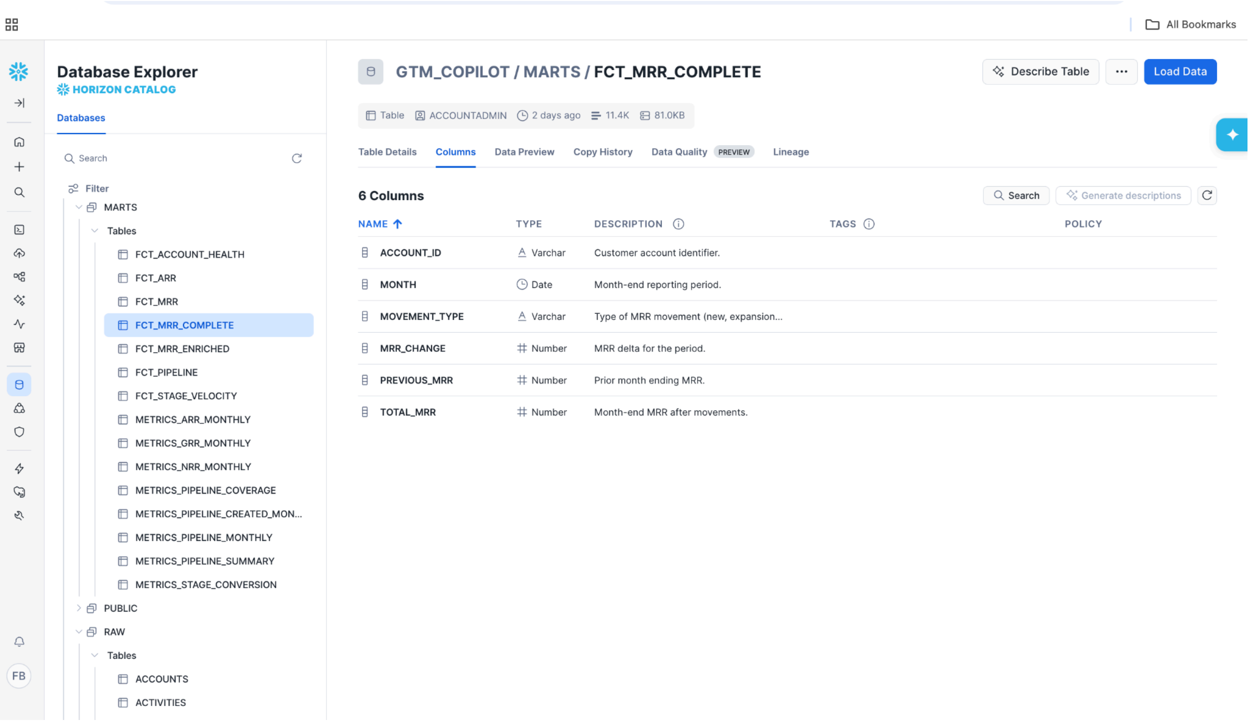
GTM_COPILOT / MARTS / FCT_MRR_COMPLETE

Table ACCOUNTADMIN 2 days ago 11.4K 81.0KB

6 Columns

NAME ↑	TYPE	DESCRIPTION	TAGS	POLICY
ACCOUNT_ID	Varchar	Customer account identifier.		
MONTH	Date	Month-end reporting period.		
MOVEMENT_TYPE	Varchar	Type of MRR movement (new, expansion...		
MRR_CHANGE	Number	MRR delta for the period.		
PREVIOUS_MRR	Number	Prior month ending MRR.		
TOTAL_MRR	Number	Month-end MRR after movements.		

3)Curated fact table with stable, metric-ready fields (MRR by account and month).


All Bookmarks
Database Explorer
HORIZON CATALOG
Databases
Search
Filter
MARTS
Tables
FCT_ACCOUNT_HEALTH
FCT_ARR
FCT_MRR
FCT_MRR_COMPLETE
FCT_MRR_ENRICHED
FCT_PIPELINE
FCT_STAGE_VELOCITY
METRICS_ARR_MONTHLY
METRICS_GRR_MONTHLY
METRICS_NRR_MONTHLY
METRICS_PIPELINE_COVERAGE
METRICS_PIPELINE_CREATED_MON...
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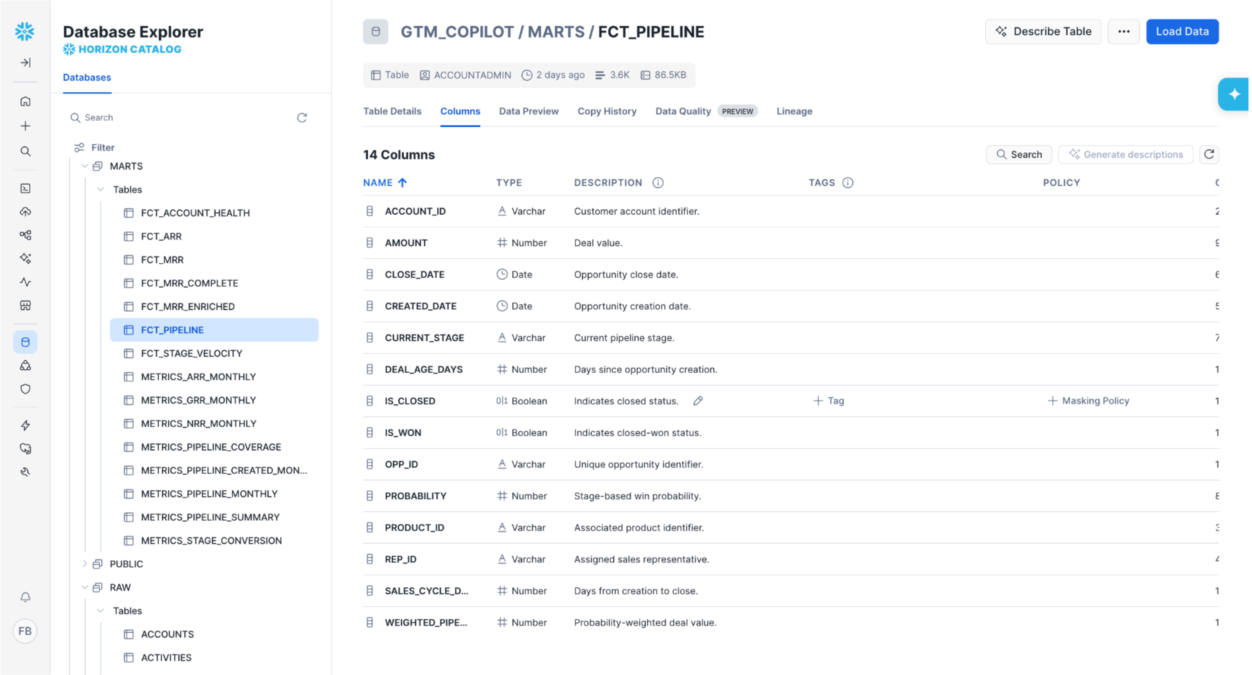
Tables
ACCOUNTS
ACTIVITIES
GTM_COPILOT / MARTS / FCT_MRR_COMPLETE
Table ACCOUNTADMIN 2 days ago 11.4K 81.0KB
6 Columns
NAME ↑ TYPE DESCRIPTION TAGS POLICY
ACCOUNT_ID Varchar Customer account identifier.
MONTH Date Month-end reporting period.
MOVEMENT_TYPE Varchar Type of MRR movement (new, expansion...
MRR_CHANGE Number MRR delta for the period.
PREVIOUS_MRR Number Prior month ending MRR.
TOTAL_MRR Number Month-end MRR after movements.

4)Pipeline fact table supporting win rate, sales cycle, and coverage analysis.



Database Explorer
HORIZON CATALOG
Databases

Search
Filter
- MARTS
  - Tables
    - FCT_ACCOUNT_HEALTH
    - FCT_ARR
    - FCT_MRR
    - FCT_MRR_COMPLETE
    - FCT_MRR_ENRICHED
    - FCT_PIPELINE
    - FCT_STAGE_VELOCITY
    - METRICS_ARR_MONTHLY
    - METRICS_GRR_MONTHLY
    - METRICS_NRR_MONTHLY
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    - METRICS_PIPELINE_CREATED_MON...
    - METRICS_PIPELINE_MONTHLY
    - METRICS_PIPELINE_SUMMARY
    - METRICS_STAGE_CONVERSION
- PUBLIC
- RAW
  - Tables
    - ACCOUNTS
    - ACTIVITIES

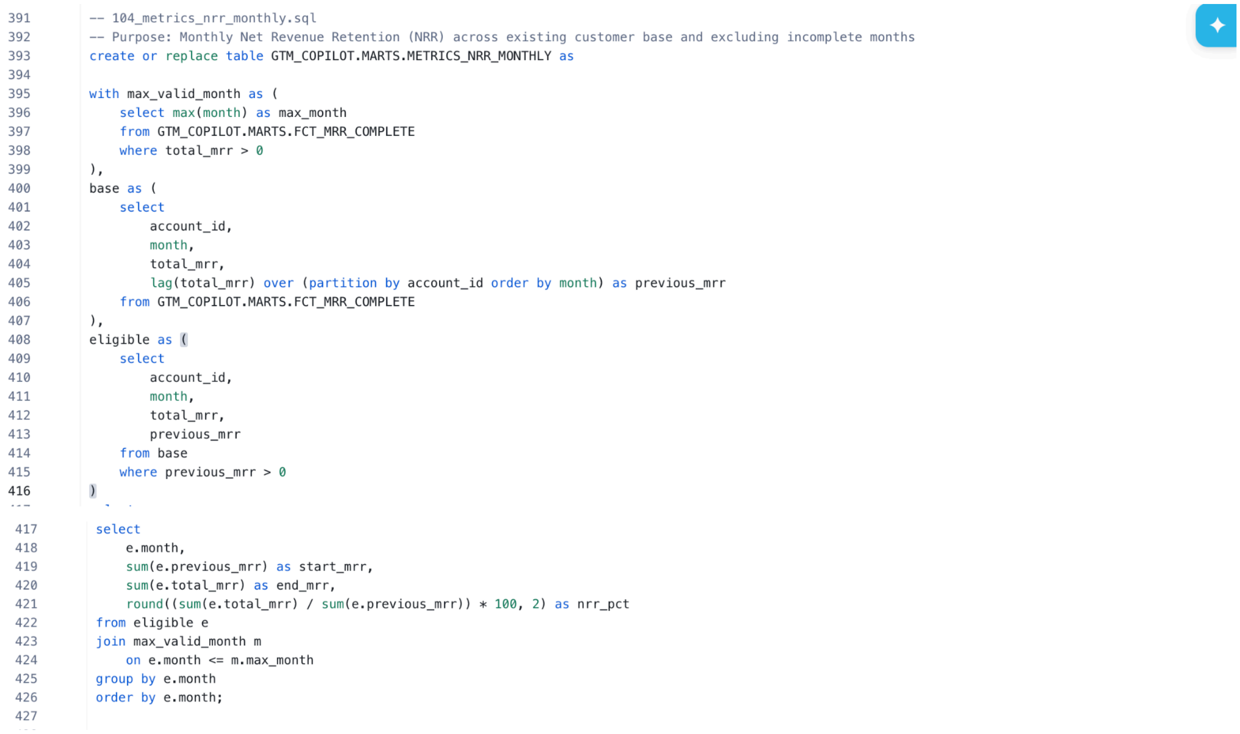
GTM_COPILOT / MARTS / FCT_PIPELINE

Table · ACCOUNTADMIN · 2 days ago · 3.6K · 86.5KB

14 Columns

NAME ↑	TYPE	DESCRIPTION	TAGS	POLICY	C
ACCOUNT_ID	Varchar	Customer account identifier.			2
AMOUNT	Number	Deal value.			9
CLOSE_DATE	Date	Opportunity close date.			6
CREATED_DATE	Date	Opportunity creation date.			5
CURRENT_STAGE	Varchar	Current pipeline stage.			7
DEAL_AGE_DAYS	Number	Days since opportunity creation.			1
IS_CLOSED	Boolean	Indicates closed status.	+ Tag	+ Masking Policy	1
IS_WON	Boolean	Indicates closed-won status.			1
OPP_ID	Varchar	Unique opportunity identifier.			1
PROBABILITY	Number	Stage-based win probability.			8
PRODUCT_ID	Varchar	Associated product identifier.			3
REP_ID	Varchar	Assigned sales representative.			4
SALES_CYCLE_D...	Number	Days from creation to close.			1
WEIGHTED_PIPE...	Number	Probability-weighted deal value.			1

5)Cohort-correct NRR/GRR logic using month T → month T+1 joins to prevent boundary-month distortion.



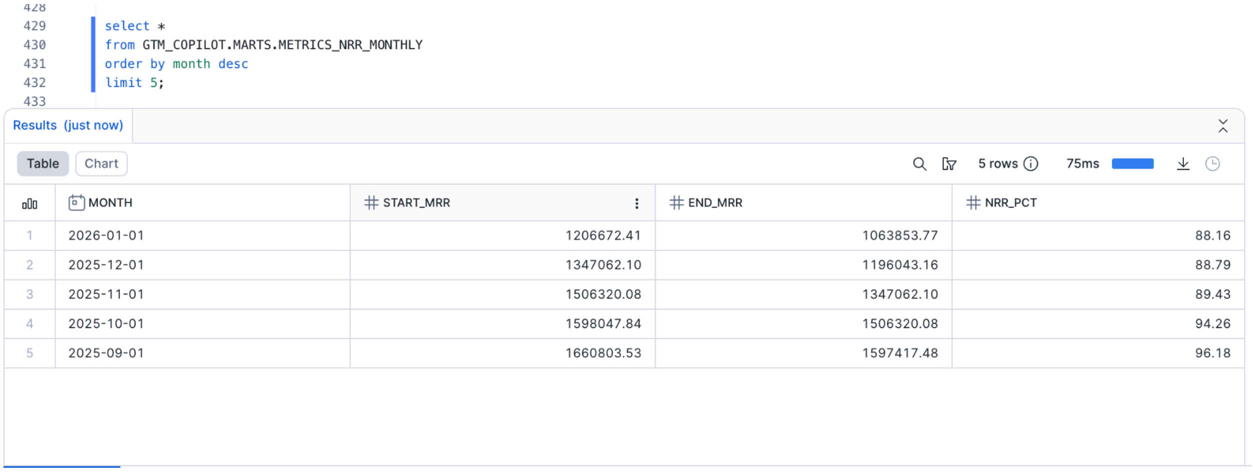
```sql
-- 104_metrics_nrr_monthly.sql
-- Purpose: Monthly Net Revenue Retention (NRR) across existing customer base and excluding incomplete months
create or replace table GTM_COPILOT.MARTS.METRICS_NRR_MONTHLY as

with max_valid_month as (
    select max(month) as max_month
    from GTM_COPILOT.MARTS.FCT_MRR_COMPLETE
    where total_mrr > 0
),
base as (
    select
        account_id,
        month,
        total_mrr,
        lag(total_mrr) over (partition by account_id order by month) as previous_mrr
    from GTM_COPILOT.MARTS.FCT_MRR_COMPLETE
),
eligible as (
    select
        account_id,
        month,
        total_mrr,
        previous_mrr
    from base
    where previous_mrr > 0
)
```

```sql
select
    e.month,
    sum(e.previous_mrr) as start_mrr,
    sum(e.total_mrr) as end_mrr,
    round((sum(e.total_mrr) / sum(e.previous_mrr)) * 100, 2) as nrr_pct
from eligible e
join max_valid_month m
    on e.month <= m.max_month
group by e.month
order by e.month;

```

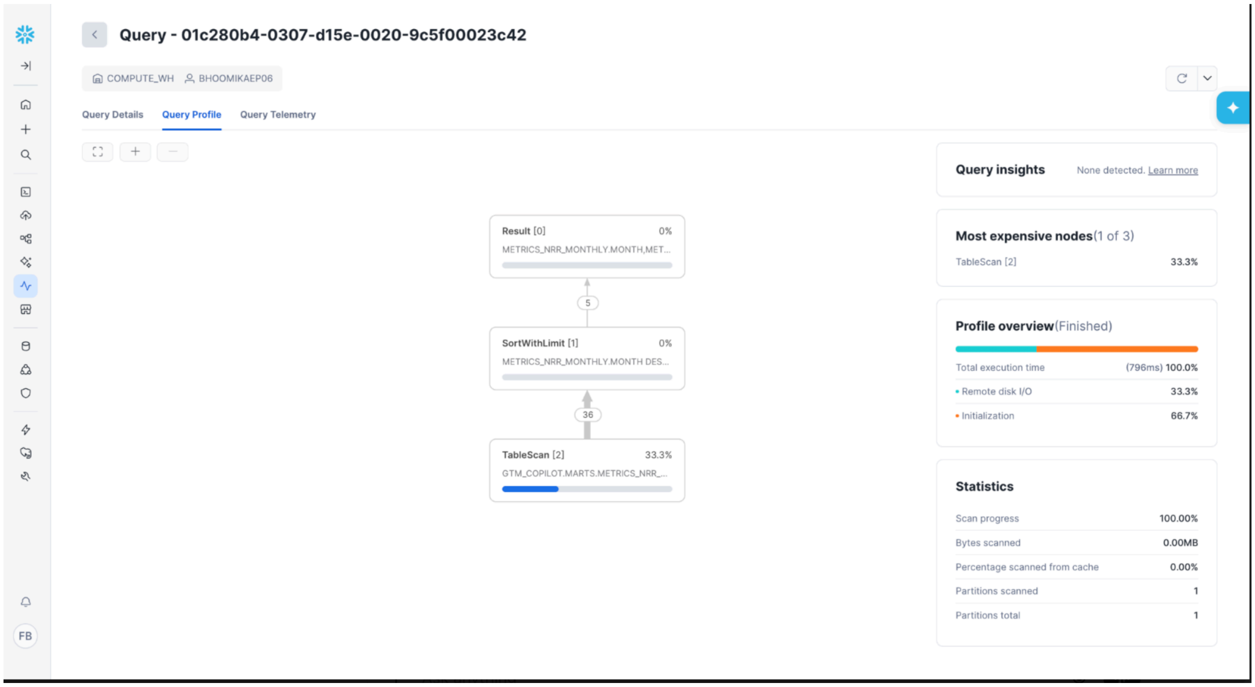
6)Validated monthly NRR outputs computed directly from curated MARTS facts.



```
select *
from GTM_COPILOT.MARTS.METRICS_NRR_MONTHLY
order by month desc
limit 5;
```

	MONTH	START_MRR	END_MRR	NRR_PCT
1	2026-01-01	1206672.41	1063853.77	88.16
2	2025-12-01	1347062.10	1196043.16	88.79
3	2025-11-01	1506320.08	1347062.10	89.43
4	2025-10-01	1598047.84	1506320.08	94.26
5	2025-09-01	1660803.53	1597417.48	96.18

7)Query Profile validating scan nodes, execution plan, and warehouse compute efficiency.



Query - 01c280b4-0307-d15e-0020-9c5f00023c42

Query insights None detected. Learn more

Most expensive nodes(1 of 3)

TableScan [2] 33.3%

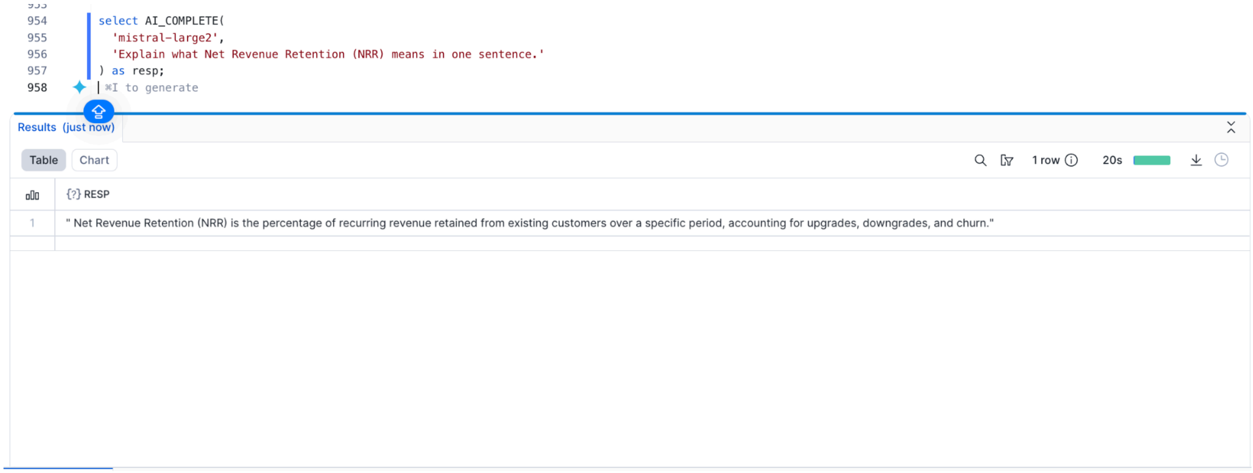
Profile overview(Finished)

Total execution time	(796ms) 100.0%
• Remote disk I/O	33.3%
• Initialization	66.7%

Statistics

Scan progress	100.00%
Bytes scanned	0.00MB
Percentage scanned from cache	0.00%
Partitions scanned	1
Partitions total	1

8)Cortex LLM execution (mistral-large2) embedded in Snowflake for contextual analytics reasoning.



```
select AI_COMPLETE(
  'mistral-large2',
  'Explain what Net Revenue Retention (NRR) means in one sentence.'
) as resp;
```

	RESP
1	" Net Revenue Retention (NRR) is the percentage of recurring revenue retained from existing customers over a specific period, accounting for upgrades, downgrades, and churn."