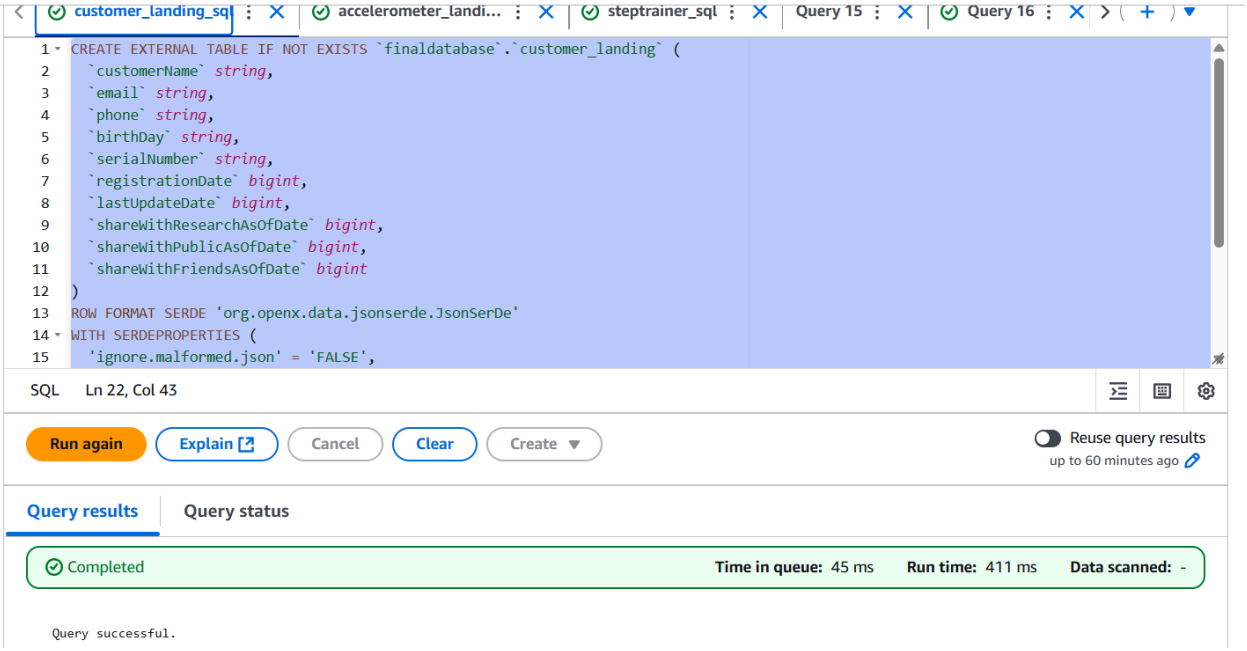
Final project

- You have decided you want to get a feel for the data you are dealing with in a semi-structured format, so you decide to create **three Glue tables** for the three landing zones. Share your customer_landing.sql, accelerometer_landing.sql, and step_trainer_landing.sql scripts in git.

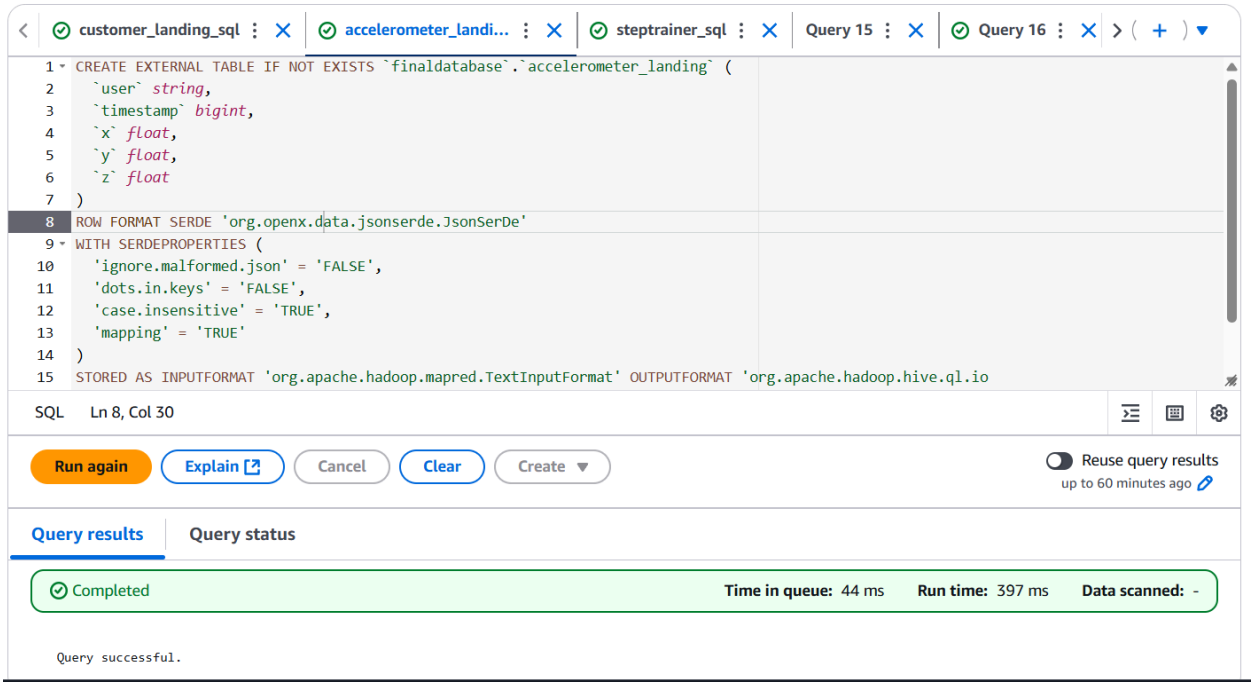
Customer_Landing:

```
CREATE EXTERNAL TABLE IF NOT EXISTS `finaldatabase`.`customer_landing` (
  `customerName` string,
  `email` string,
  `phone` string,
  `birthDay` string,
  `serialNumber` string,
  `registrationDate` bigint,
  `lastUpdateDate` bigint,
  `shareWithResearchAsOfDate` bigint,
  `shareWithPublicAsOfDate` bigint,
  `shareWithFriendsAsOfDate` bigint
)
ROW FORMAT SERDE 'org.openx.data.jsonserde.JsonSerDe'
WITH SERDEPROPERTIES (
  'ignore.malformed.json' = 'FALSE',
  'dots.in.keys' = 'FALSE',
  'case.insensitive' = 'TRUE',
  'mapping' = 'TRUE'
)
STORED AS INPUTFORMAT 'org.apache.hadoop.mapred.TextInputFormat' OUTPUTFORMAT
'org.apache.hadoop.hive.ql.io.HiveIgnoreKeyTextOutputFormat'
LOCATION 's3://finalprojectsaleem/customer/landing/'
TBLPROPERTIES ('classification' = 'json');
```



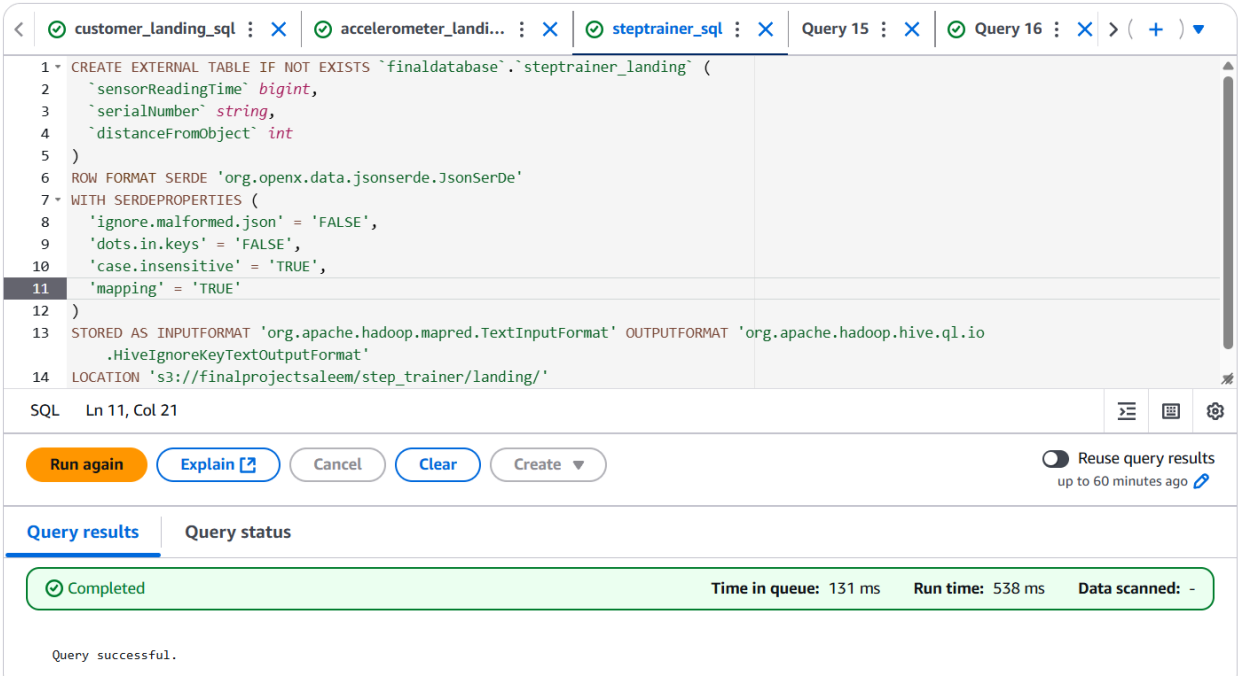
Accelerometer_landing:

```
CREATE EXTERNAL TABLE IF NOT EXISTS `finaldatabase`.`accelerometer_landing` (
  `user` string,
  `timestamp` bigint,
  `x` float,
  `y` float,
  `z` float
)
ROW FORMAT SERDE 'org.openx.data.jsonserde.JsonSerDe'
WITH SERDEPROPERTIES (
  'ignore.malformed.json' = 'FALSE',
  'dots.in.keys' = 'FALSE',
  'case.insensitive' = 'TRUE',
  'mapping' = 'TRUE'
)
STORED AS INPUTFORMAT 'org.apache.hadoop.mapred.TextInputFormat' OUTPUTFORMAT
'org.apache.hadoop.hive.ql.io.HiveIgnoreKeyTextOutputFormat'
LOCATION 's3://finalprojectsaleem/accelerometer/landing/'
TBLPROPERTIES ('classification' = 'json');
```



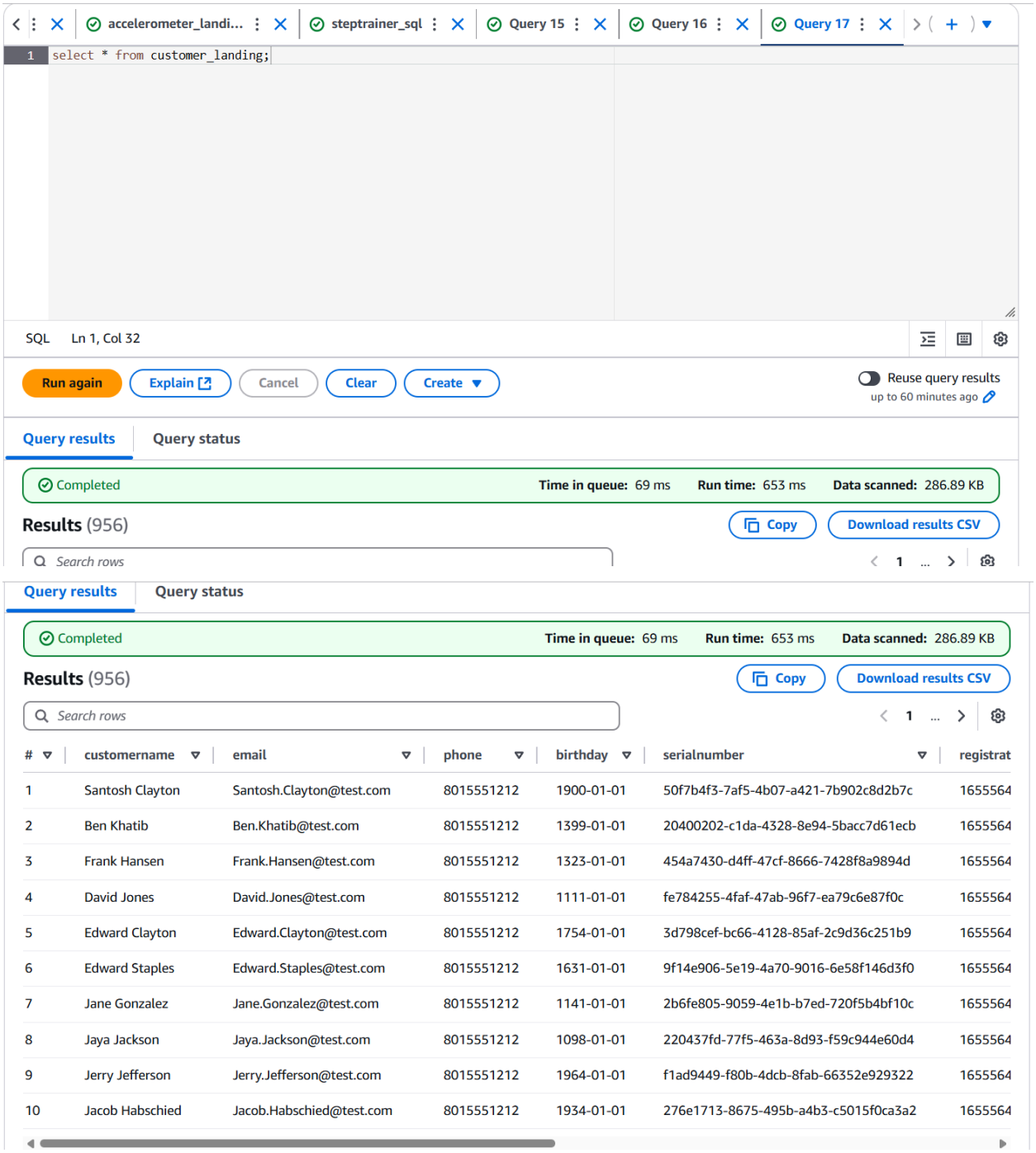
Steptrainer_landing:

```
CREATE EXTERNAL TABLE IF NOT EXISTS `finaldatabase`.`steptrainer_landing` (
  `sensorReadingTime` bigint,
  `serialNumber` string,
  `distanceFromObject` int
)
ROW FORMAT SERDE 'org.openx.data.jsonserde.JsonSerDe'
WITH SERDEPROPERTIES (
  'ignore.malformed.json' = 'FALSE',
  'dots.in.keys' = 'FALSE',
  'case.insensitive' = 'TRUE',
  'mapping' = 'TRUE'
)
STORED AS INPUTFORMAT 'org.apache.hadoop.mapred.TextInputFormat' OUTPUTFORMAT
'org.apache.hadoop.hive.ql.io.HiveIgnoreKeyTextOutputFormat'
LOCATION 's3://finalprojectsaleem/step_trainer/landing/'
TBLPROPERTIES ('classification' = 'json');
```



- Query those tables using Athena, and take a screenshot of each one showing the resulting data. Name the screenshots customer_landing(.png,.jpeg, etc.), accelerometer_landing(.png,.jpeg, etc.), step_trainer_landing (.png, .jpeg, etc.).

Customer_landing:



Query results | Query status

Completed | Time in queue: 69 ms | Run time: 653 ms | Data scanned: 286.89 KB

Results (956)

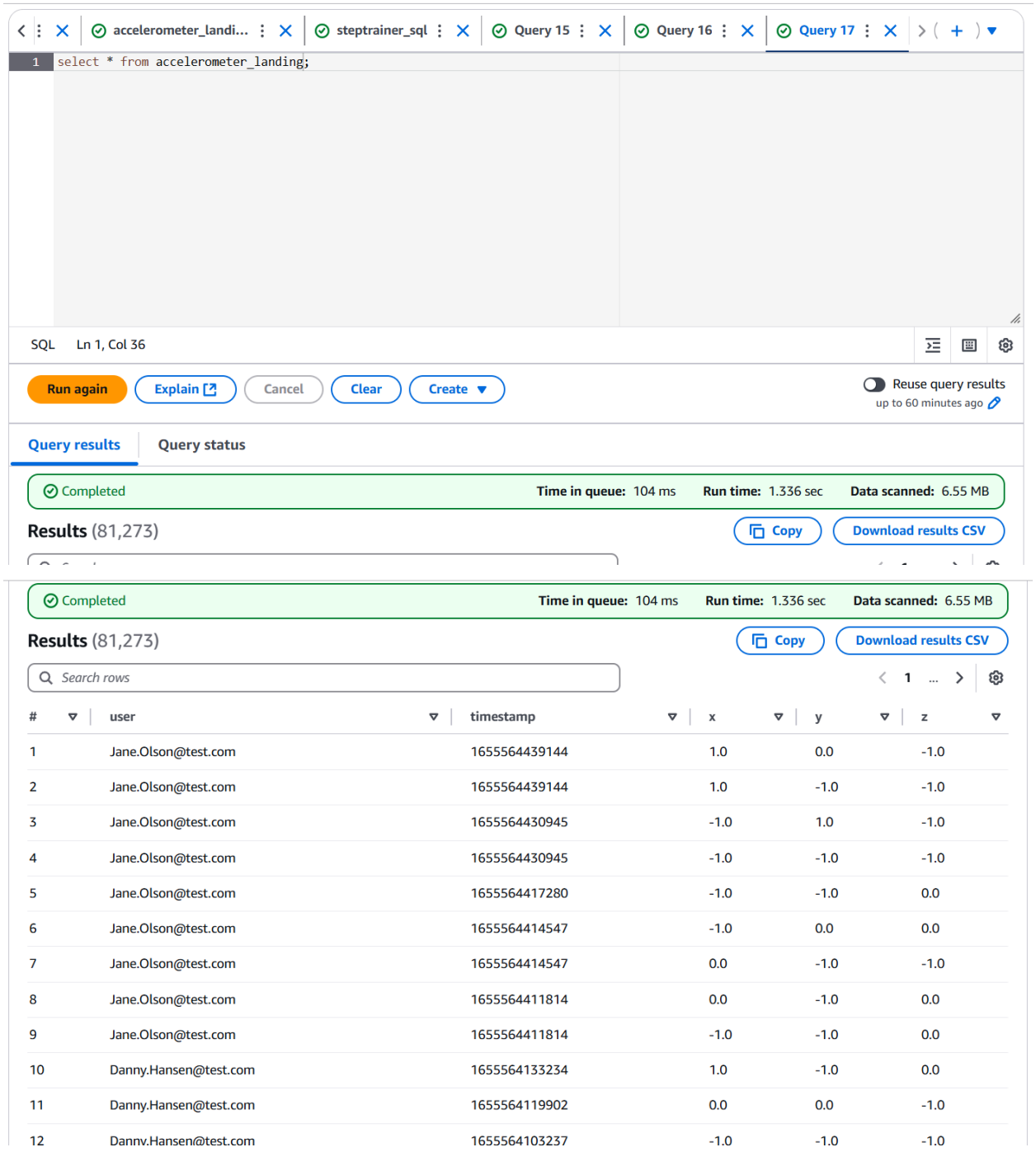
Copy | Download results CSV

Search rows

1 ...

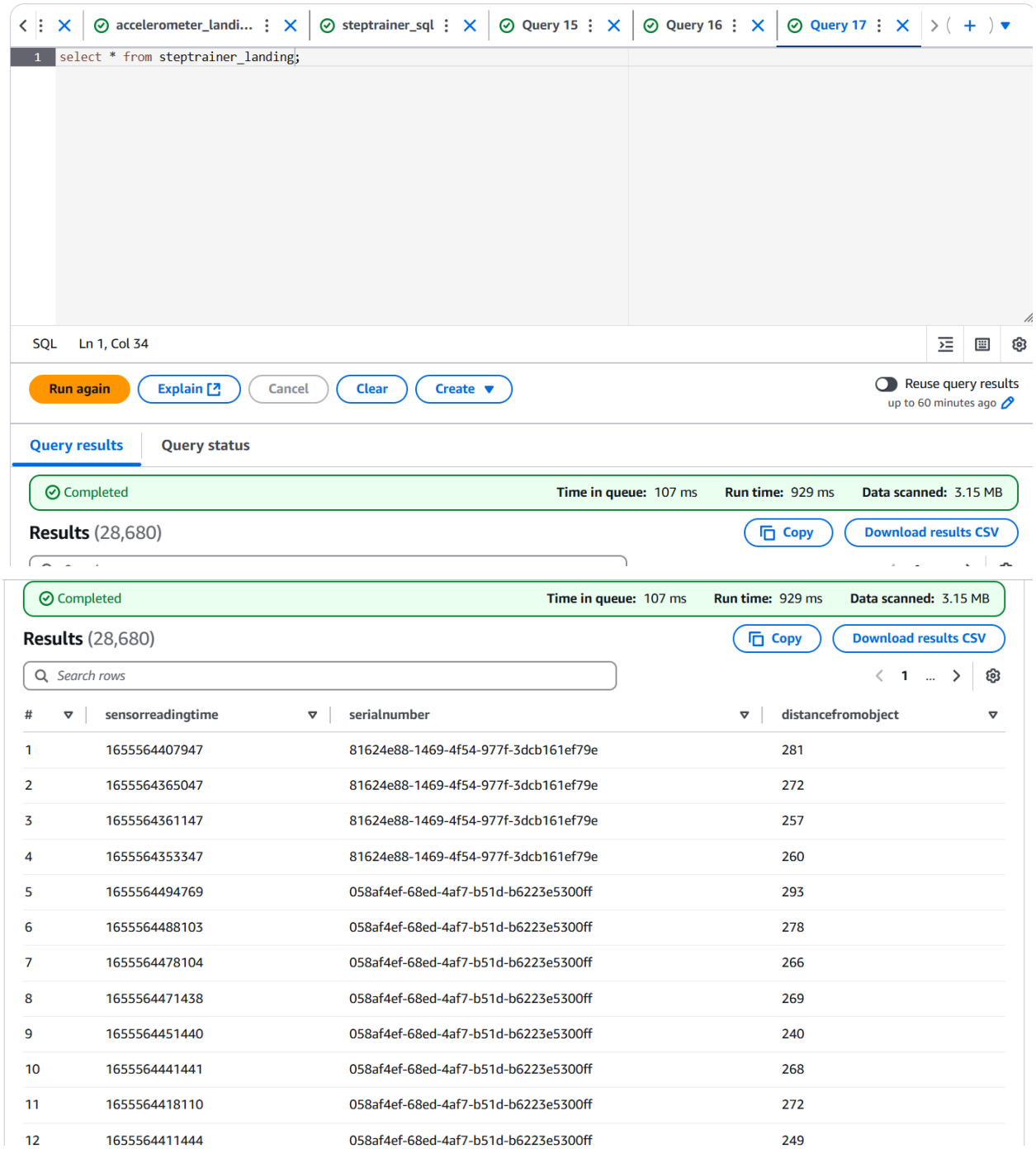
#	customername	email	phone	birthday	serialnumber	registrat
1	Santosh Clayton	Santosh.Clayton@test.com	8015551212	1900-01-01	50f7b4f3-7af5-4b07-a421-7b902c8d2b7c	1655564
2	Ben Khatib	Ben.Khatib@test.com	8015551212	1399-01-01	20400202-c1da-4328-8e94-5bacc7d61ecb	1655564
3	Frank Hansen	Frank.Hansen@test.com	8015551212	1323-01-01	454a7430-d4ff-47cf-8666-7428f8a9894d	1655564
4	David Jones	David.Jones@test.com	8015551212	1111-01-01	fe784255-4faf-47ab-96f7-ea79c6e87f0c	1655564
5	Edward Clayton	Edward.Clayton@test.com	8015551212	1754-01-01	3d798cef-bc66-4128-85af-2c9d36c251b9	1655564
6	Edward Staples	Edward.Staples@test.com	8015551212	1631-01-01	9f14e906-5e19-4a70-9016-6e58f146d3f0	1655564
7	Jane Gonzalez	Jane.Gonzalez@test.com	8015551212	1141-01-01	2b6fe805-9059-4e1b-b7ed-720f5b4bf10c	1655564
8	Jaya Jackson	Jaya.Jackson@test.com	8015551212	1098-01-01	220437fd-77f5-463a-8d93-f59c944e60d4	1655564
9	Jerry Jefferson	Jerry.Jefferson@test.com	8015551212	1964-01-01	f1ad9449-f80b-4dcb-8fab-66352e929322	1655564
10	Jacob Habschied	Jacob.Habschied@test.com	8015551212	1934-01-01	276e1713-8675-495b-a4b3-c5015f0ca3a2	1655564

Accelerometer_landing:



#	user	timestamp	x	y	z
1	Jane.Olson@test.com	1655564439144	1.0	0.0	-1.0
2	Jane.Olson@test.com	1655564439144	1.0	-1.0	-1.0
3	Jane.Olson@test.com	1655564430945	-1.0	1.0	-1.0
4	Jane.Olson@test.com	1655564430945	-1.0	-1.0	-1.0
5	Jane.Olson@test.com	1655564417280	-1.0	-1.0	0.0
6	Jane.Olson@test.com	1655564414547	-1.0	0.0	0.0
7	Jane.Olson@test.com	1655564414547	0.0	-1.0	-1.0
8	Jane.Olson@test.com	1655564411814	0.0	-1.0	0.0
9	Jane.Olson@test.com	1655564411814	-1.0	-1.0	0.0
10	Danny.Hansen@test.com	1655564133234	1.0	-1.0	0.0
11	Danny.Hansen@test.com	1655564119902	0.0	0.0	-1.0
12	Danny.Hansen@test.com	1655564103237	-1.0	-1.0	-1.0

Steptrainer_landing:



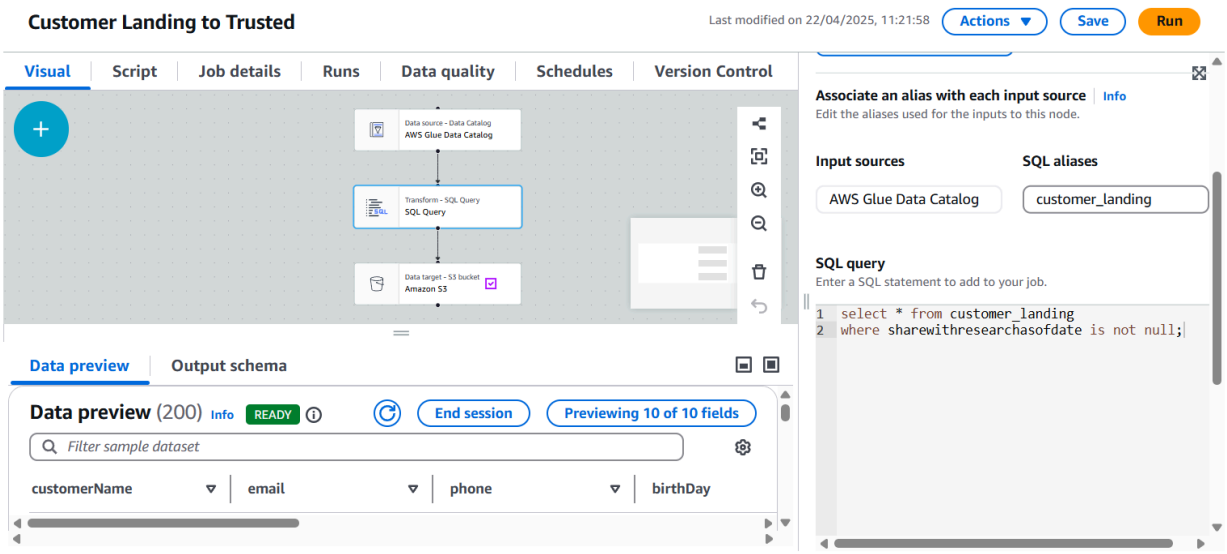
#	sensorreadingtime	serialnumber	distancefromobject
1	1655564407947	81624e88-1469-4f54-977f-3dcb161ef79e	281
2	1655564365047	81624e88-1469-4f54-977f-3dcb161ef79e	272
3	1655564361147	81624e88-1469-4f54-977f-3dcb161ef79e	257
4	1655564353347	81624e88-1469-4f54-977f-3dcb161ef79e	260
5	1655564494769	058af4ef-68ed-4af7-b51d-b6223e5300ff	293
6	1655564488103	058af4ef-68ed-4af7-b51d-b6223e5300ff	278
7	1655564478104	058af4ef-68ed-4af7-b51d-b6223e5300ff	266
8	1655564471438	058af4ef-68ed-4af7-b51d-b6223e5300ff	269
9	1655564451440	058af4ef-68ed-4af7-b51d-b6223e5300ff	240
10	1655564441441	058af4ef-68ed-4af7-b51d-b6223e5300ff	268
11	1655564418110	058af4ef-68ed-4af7-b51d-b6223e5300ff	272
12	1655564411444	058af4ef-68ed-4af7-b51d-b6223e5300ff	249

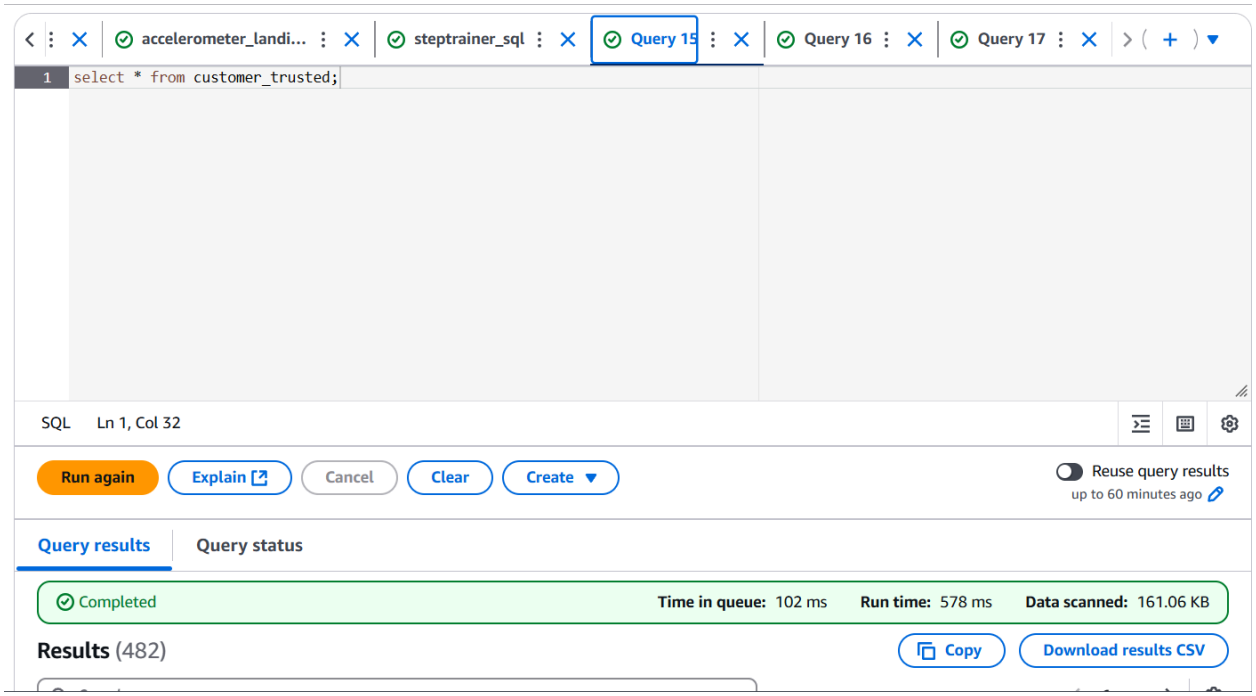
The Data Science team has done some preliminary data analysis and determined that the Accelerometer Records each match one of the Customer Records. They would like you to create 2 AWS Glue Jobs that do the following:

- **Sanitize the Customer data from the Website (Landing Zone) and only store the Customer Records who agreed to share their data for research purposes (Trusted Zone) - creating a Glue Table called customer_trusted.**

- **Sanitize the Accelerometer data from the Mobile App (Landing Zone) - and only store Accelerometer Readings from customers who agreed to share their data for research purposes (Trusted Zone) - creating a Glue Table called accelerometer_trusted.**
- **You need to verify your Glue job is successful and only contains Customer Records from people who agreed to share their data. Query your Glue customer_trusted table with Athena and take a screenshot of the data. Name the screenshot customer_trusted(.png,.jpeg, etc.).**

Customer_trusted:



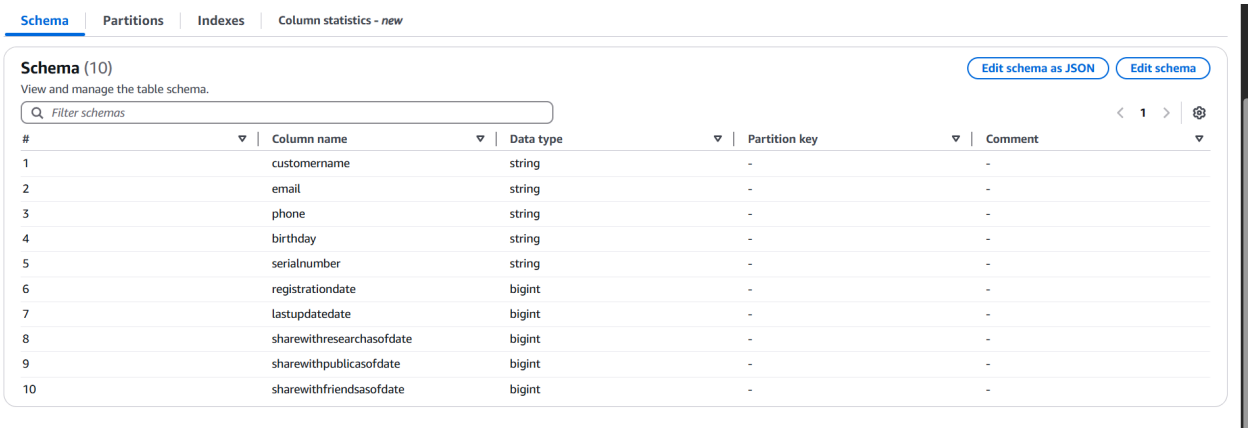


Completed
Time in queue: 102 ms
Run time: 578 ms
Data scanned: 161.06 KB
Results (482)
Copy
Download results CSV

Search rows

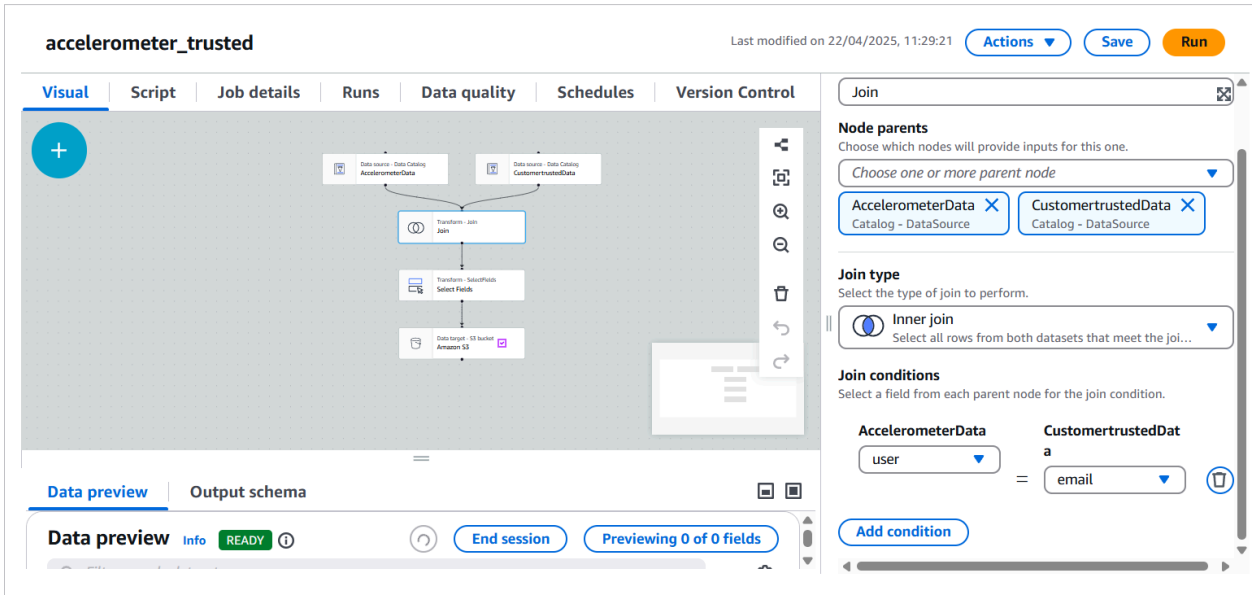
1 ...

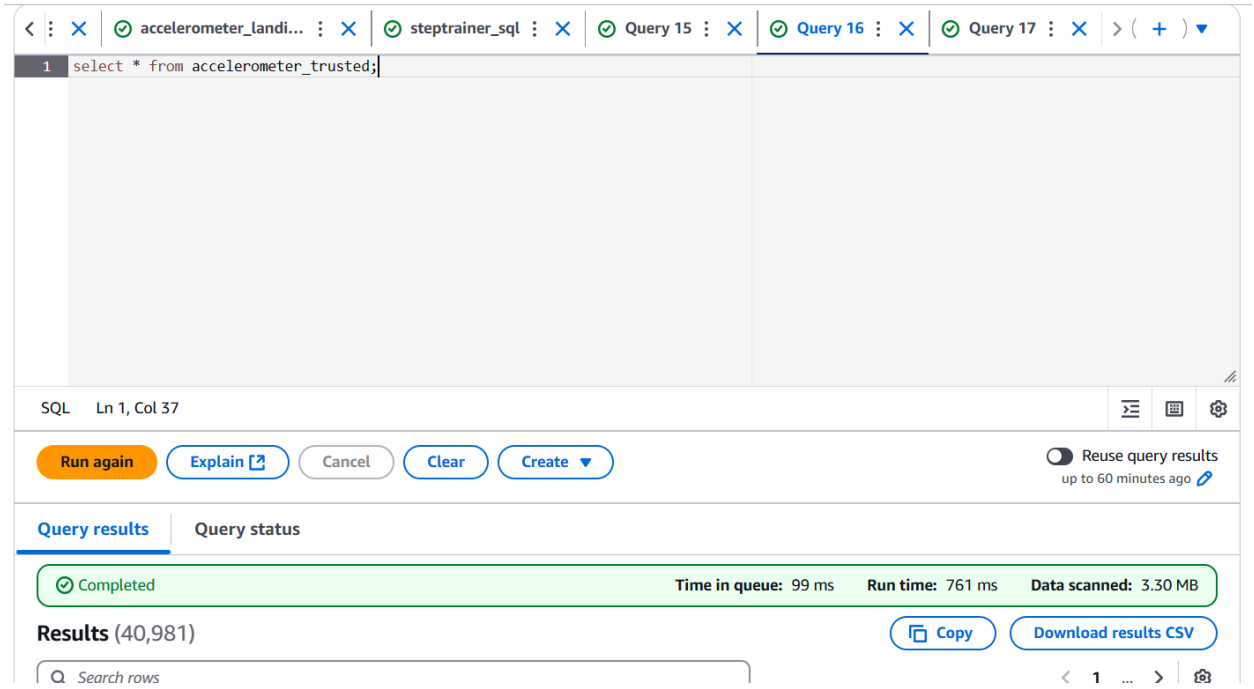
#	customername	email	phone	birthday	serialnumber	registration
1	Santosh Clayton	Santosh.Clayton@test.com	8015551212	1900-01-01	50f7b4f3-7af5-4b07-a421-7b902c8d2b7c	165556437
2	Ben Khatib	Ben.Khatib@test.com	8015551212	1399-01-01	20400202-c1da-4328-8e94-5bacc7d61ecb	165556441
3	Jane Gonzalez	Jane.Gonzalez@test.com	8015551212	1141-01-01	2b6fe805-9059-4e1b-b7ed-720f5b4bf10c	165556443
4	Jaya Jackson	Jaya.Jackson@test.com	8015551212	1098-01-01	220437fd-77f5-463a-8d93-f59c944e60d4	165556443
5	Jerry Jefferson	Jerry.Jefferson@test.com	8015551212	1964-01-01	f1ad9449-f80b-4dcb-8fab-66352e929322	165556408
6	Senthil Smith	Senthil.Smith@test.com	8015551212	1587-01-01	dbfde3b7-69bf-4c56-a9e8-dfd48af6df89	165556440
7	Santosh Davis	Santosh.Davis@test.com	8015551212	1745-01-01	b5f6b144-0260-4c4f-83e1-469150f9055b	165556438
8	Sarah Doshi	Sarah.Doshi@test.com	8015551212	1126-01-01	466bb1b9-5dc3-4607-8f76-e0bcdcf6b9c7	165556414
9	Ben Phillips	Ben.Phillips@test.com	8015551212	1404-01-01	314ed64d-643f-4cd3-b164-f4a8ae02fc29	165556412
10	David Mitra	David.Mitra@test.com	8015551212	1201-01-01	ba582015-fbb3-4842-887a-e291f773df84	165556442
11	Christina Mitra	Christina.Mitra@test.com	8015551212	1160-01-01	7414a106-ee97-4824-ab25-70bedeae1136	165556443



#	Column name	Data type	Partition key	Comment
1	customername	string	-	-
2	email	string	-	-
3	phone	string	-	-
4	birthday	string	-	-
5	serialnumber	string	-	-
6	registrationdate	bigint	-	-
7	lastupdatedate	bigint	-	-
8	sharewithresearchasofdate	bigint	-	-
9	sharewithpublicasofdate	bigint	-	-
10	sharewithfriendsasofdate	bigint	-	-

Accelerometer_trusted:


accelerometer_trusted
Last modified on 22/04/2025, 11:29:21
Actions
Save
Run
Visual
Script
Job details
Runs
Data quality
Schedules
Version Control
Join
Node parents
Choose which nodes will provide inputs for this one.
Choose one or more parent node
AccelerometerData
Catalog - DataSource
CustomertrustedData
Catalog - DataSource
Join type
Select the type of join to perform.
Inner join
Select all rows from both datasets that meet the joi...
Join conditions
Select a field from each parent node for the join condition.
AccelerometerData
CustomertrustedDat
a
user
=
email
Add condition
Data preview
Output schema
Data preview
Info
READY
End session
Previewing 0 of 0 fields


accelerometer_landi...
steptrainer_sql
Query 15
Query 16
Query 17
1
select * from accelerometer_trusted;
SQL
Ln 1, Col 37
Run again
Explain
Cancel
Clear
Create
Reuse query results
up to 60 minutes ago
Query results
Query status
Completed
Time in queue: 99 ms
Run time: 761 ms
Data scanned: 3.30 MB
Results (40,981)
Copy
Download results CSV
Search rows
1

Completed | **Time in queue:** 99 ms | **Run time:** 761 ms | **Data scanned:** 3.30 MB

Results (40,981)

Copy | Download results CSV

Search rows

1 ...

#	z	user	y	x	timestamp
1	-1.0	Senthil.Huey@test.com	1.0	0.0	1655564499136
2	-1.0	Senthil.Huey@test.com	0.0	0.0	1655564499136
3	0.0	Senthil.Huey@test.com	0.0	1.0	1655564481340
4	-1.0	Senthil.Huey@test.com	-1.0	1.0	1655564475408
5	-1.0	Senthil.Huey@test.com	1.0	0.0	1655564475408
6	0.0	Senthil.Huey@test.com	1.0	0.0	1655564457612
7	0.0	Senthil.Huey@test.com	0.0	0.0	1655564436850
8	-1.0	Senthil.Huey@test.com	1.0	-1.0	1655564430918
9	0.0	Senthil.Huey@test.com	0.0	1.0	1655564424986
10	0.0	Senthil.Huey@test.com	0.0	1.0	1655564502102
11	-1.0	Senthil.Huey@test.com	-1.0	-1.0	1655564496170

Schema | Partitions | Indexes | Column statistics - *new*

Schema (5)

View and manage the table schema.

Edit schema as JSON | Edit schema

Filter schemas

1

#	Column name	Data type	Partition key	Comment
1	z	double	-	-
2	user	string	-	-
3	y	double	-	-
4	x	double	-	-
5	timestamp	bigint	-	-