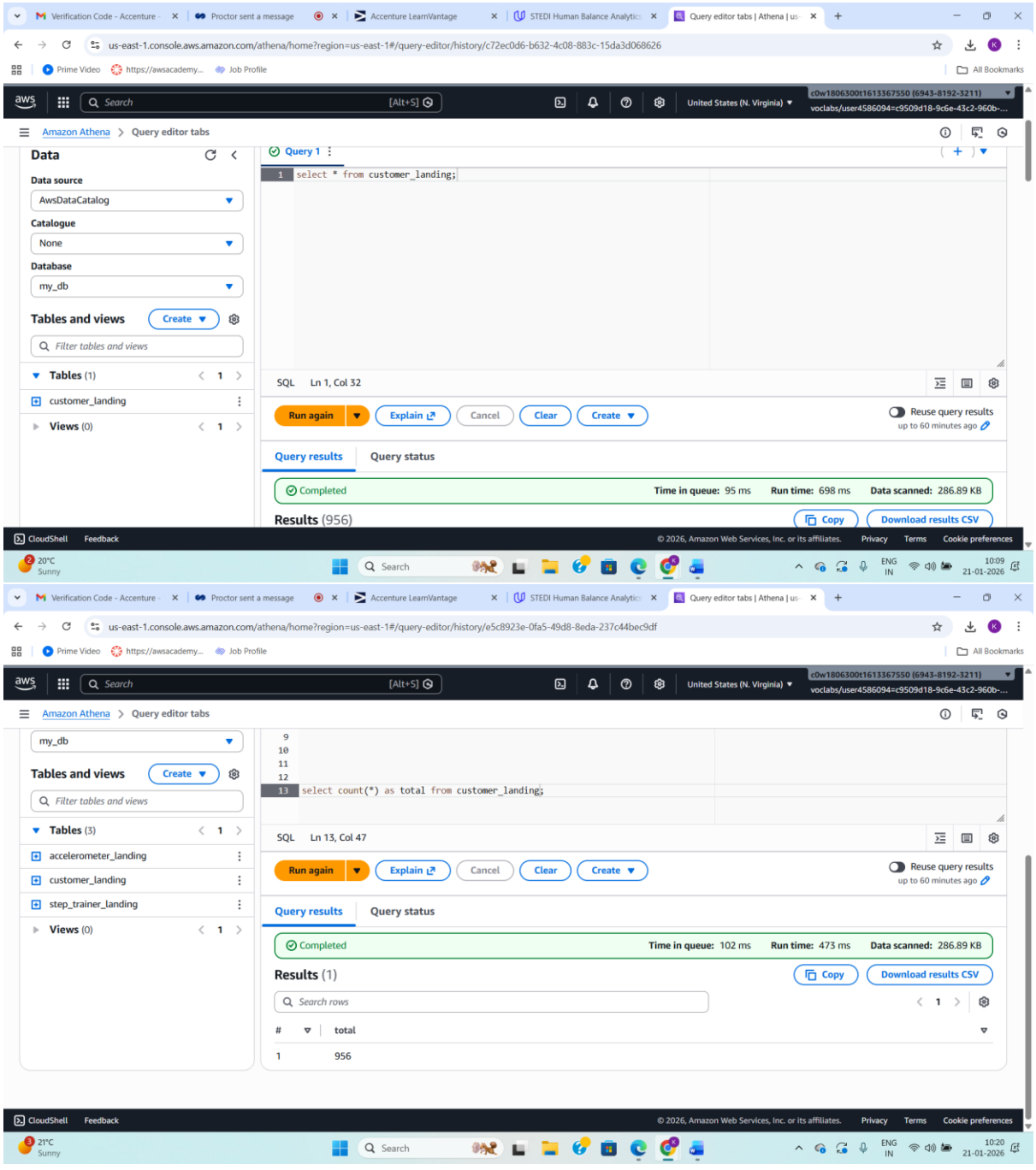
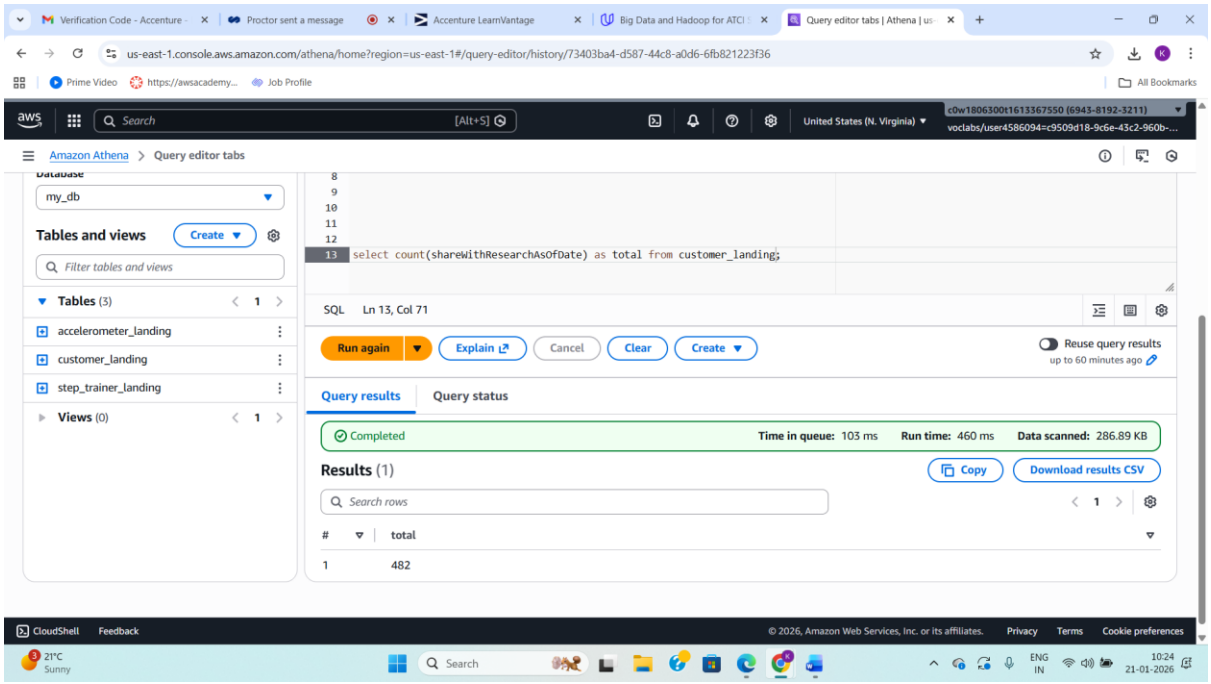
STEDI HUMAN BALANCE ANALYTICS PROJECT

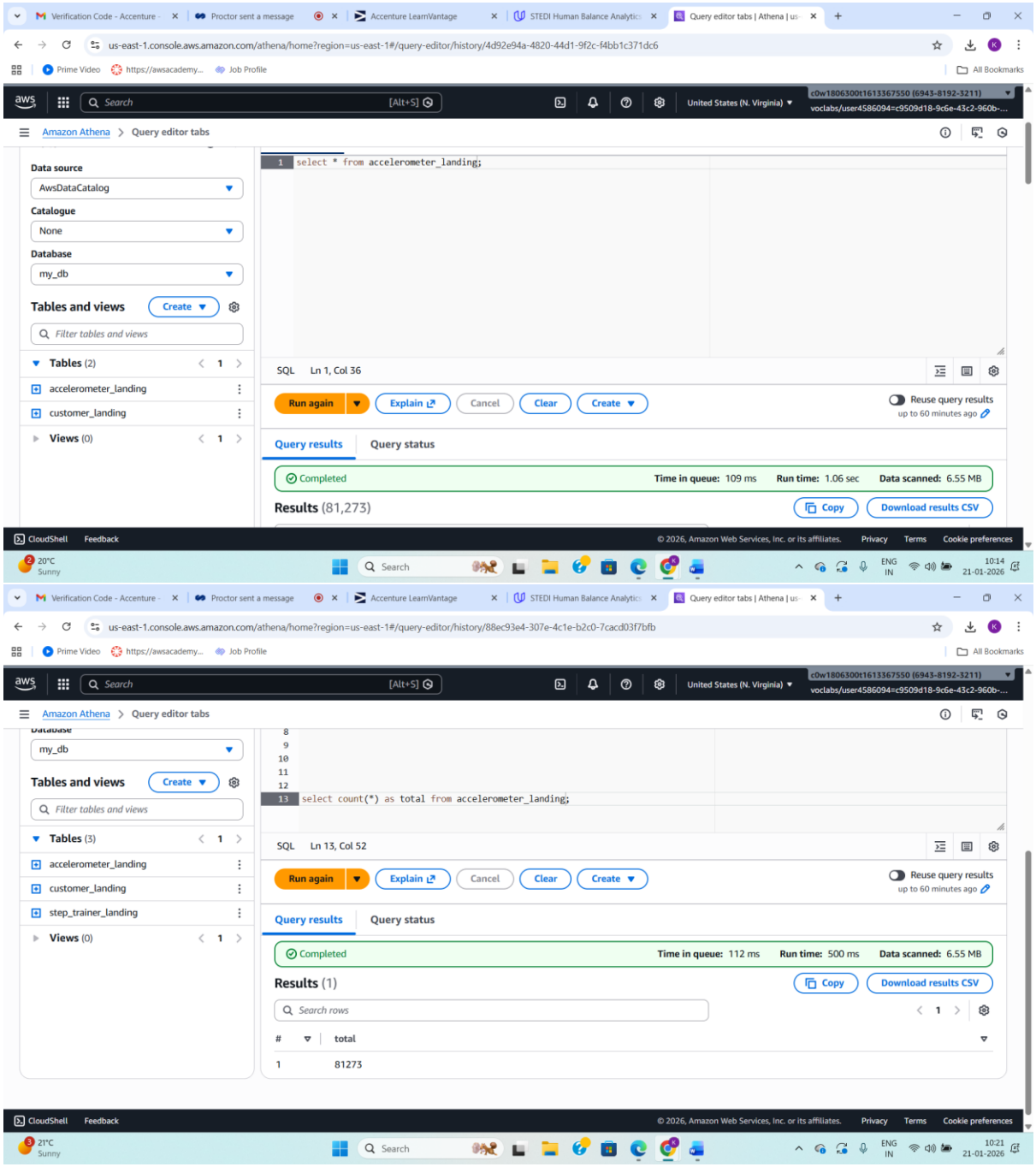
ATHENA OUTPUTS

1.customer_landing

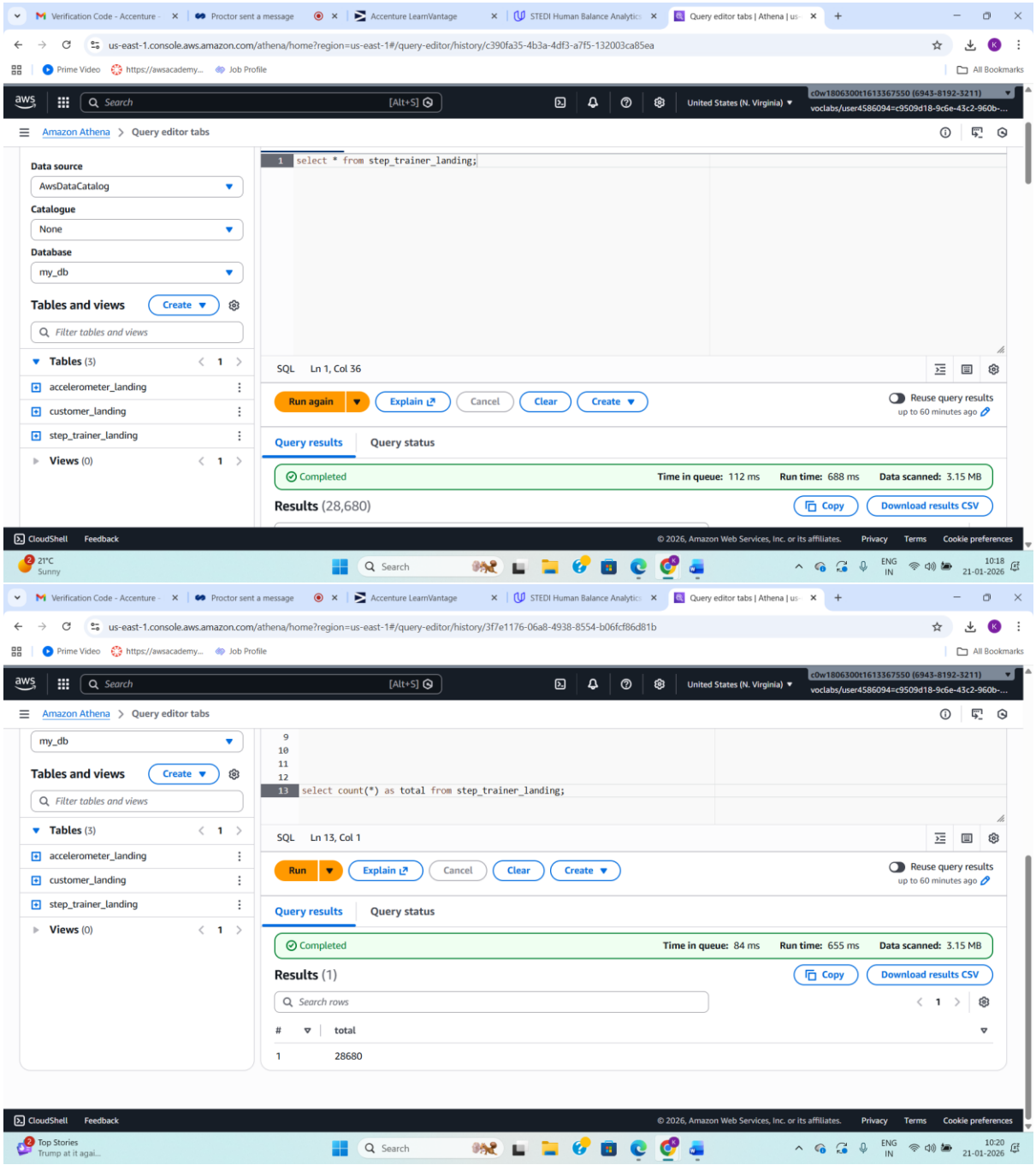



Amazon Athena > Query editor tabs
my_db
Tables and views
Create
Filter tables and views
Tables (3)
accelerometer_landing
customer_landing
step_trainer_landing
Views (0)
select count(shareWithResearchAsOfDate) as total from customer_landing;
SQL Ln 13, Col 71
Run again
Explain
Cancel
Clear
Create
Reuse query results
up to 60 minutes ago
Query results
Query status
Completed
Time in queue: 103 ms
Run time: 460 ms
Data scanned: 286.89 KB
Results (1)
Copy
Download results CSV
Search rows
total
1 482
CloudShell
Feedback
© 2026, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

2.accelerometer_landing



3.step_trainer_landing



SQL DDL SCRIPTS

1.customer_landing.sql

```
CREATE EXTERNAL TABLE `customer_landing`(
  `customername` string COMMENT 'from deserializer',
  `email` string COMMENT 'from deserializer',
  `phone` string COMMENT 'from deserializer',
  `birthday` string COMMENT 'from deserializer',
```

```
  `serialnumber` string COMMENT 'from deserializer',
  `sharewithpublicasofdate` bigint COMMENT 'from deserializer',
  `registrationdate` bigint COMMENT 'from deserializer',
  `sharewithresearchasofdate` bigint COMMENT 'from deserializer',
  `lastupdatedate` bigint COMMENT 'from deserializer',
  `sharewithfriendsasofdate` bigint COMMENT 'from deserializer')
ROW FORMAT SERDE
  'org.openx.data.jsonserde.JsonSerDe'
STORED AS INPUTFORMAT
  'org.apache.hadoop.mapred.TextInputFormat'
OUTPUTFORMAT
  'org.apache.hadoop.hive.ql.io.HiveIgnoreKeyTextOutputFormat'
LOCATION
  's3://stedi-uda-project/landing/customer_landing/'
TBLPROPERTIES (
  'classification'='json')
```

2.accelerometer_landing.sql

```
CREATE EXTERNAL TABLE `accelerometer_landing`(
  `user` string COMMENT 'from deserializer',
  `timestamp` string COMMENT 'from deserializer',
  `x` float COMMENT 'from deserializer',
  `y` float COMMENT 'from deserializer',
  `z` float COMMENT 'from deserializer')
ROW FORMAT SERDE
  'org.openx.data.jsonserde.JsonSerDe'
STORED AS INPUTFORMAT
  'org.apache.hadoop.mapred.TextInputFormat'
OUTPUTFORMAT
  'org.apache.hadoop.hive.ql.io.HiveIgnoreKeyTextOutputFormat'
LOCATION
  's3://stedi-uda-project/landing/accelerometer_landing/'
```

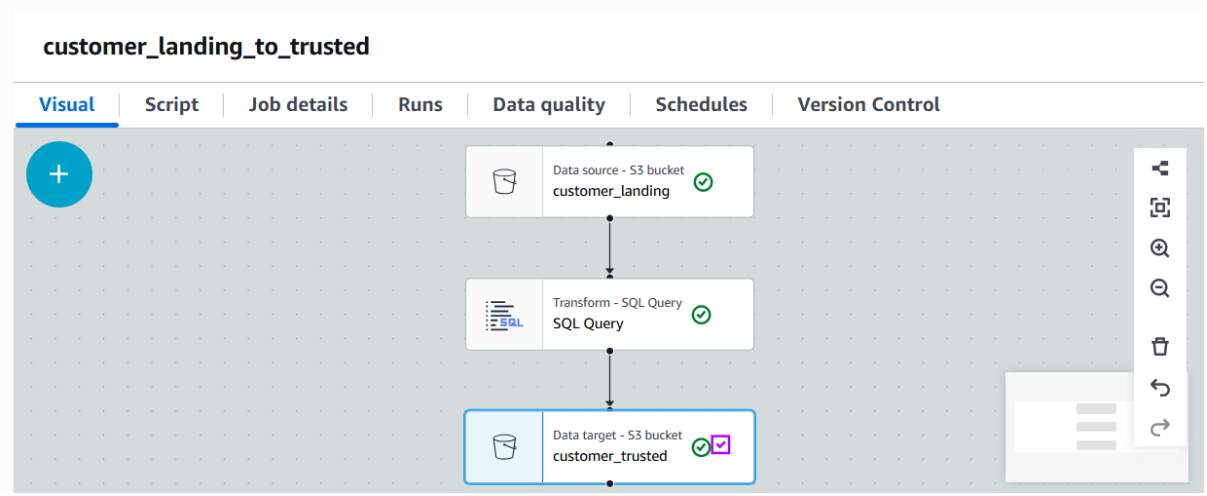
```
TBLPROPERTIES (
  'classification'='json')
```

3.step_trainer_landing.sql

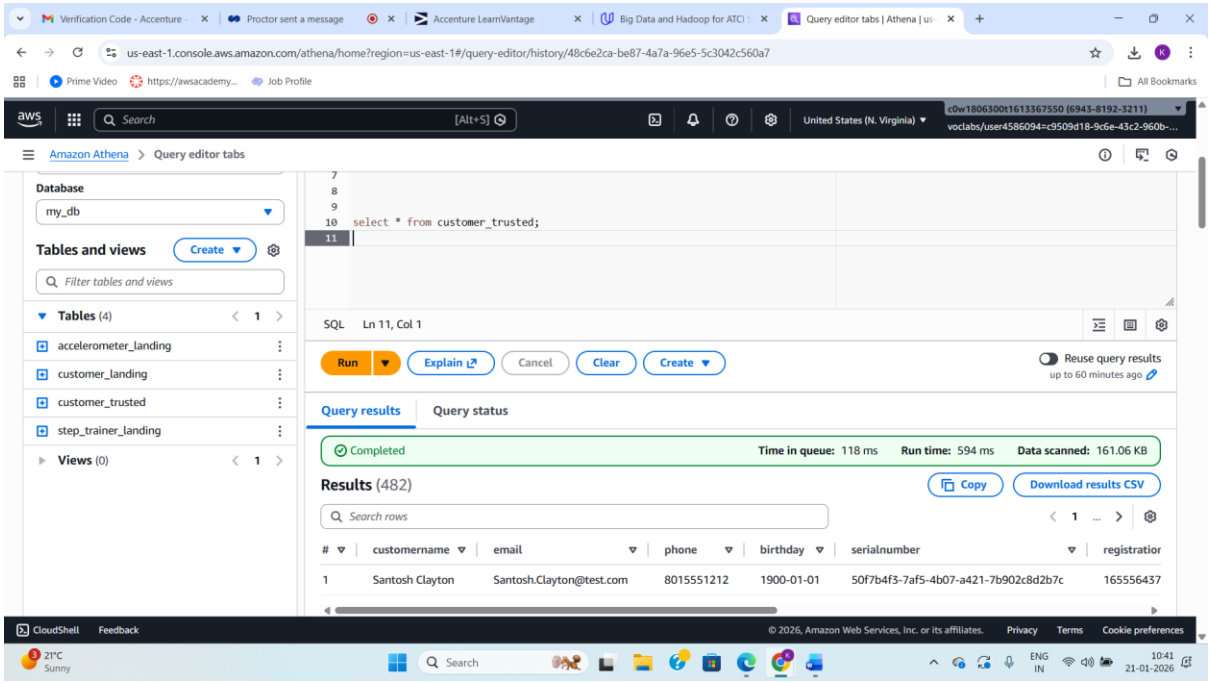
```
CREATE EXTERNAL TABLE `step_trainer_landing`(
  `sensorreadingtime` bigint COMMENT 'from deserializer',
  `serialnumber` string COMMENT 'from deserializer',
  `distancefromobject` int COMMENT 'from deserializer')
ROW FORMAT SERDE
  'org.openx.data.jsonserde.JsonSerDe'
STORED AS INPUTFORMAT
  'org.apache.hadoop.mapred.TextInputFormat'
OUTPUTFORMAT
  'org.apache.hadoop.hive.ql.io.HiveIgnoreKeyTextOutputFormat'
LOCATION
  's3://stedi-uda-project/landing/step_trainer_landing/'
TBLPROPERTIES (
  'classification'='json')
```

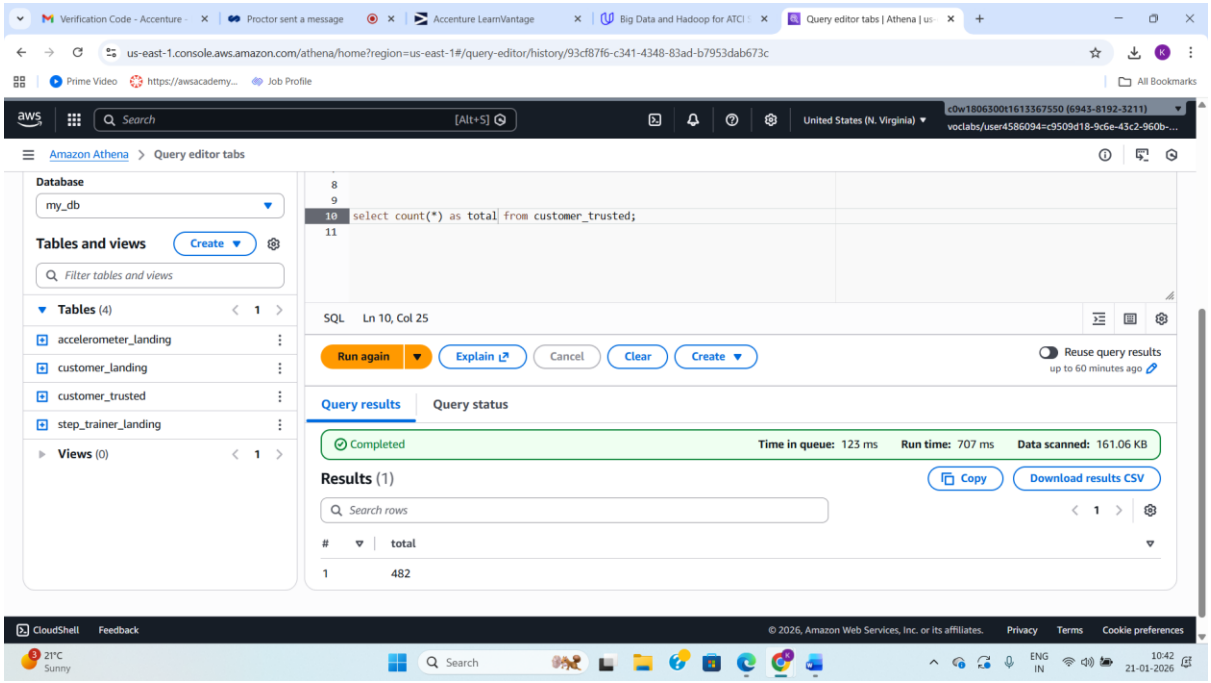
GLUE STUDIO OUTPUTS

1.customer_landing_to_trusted



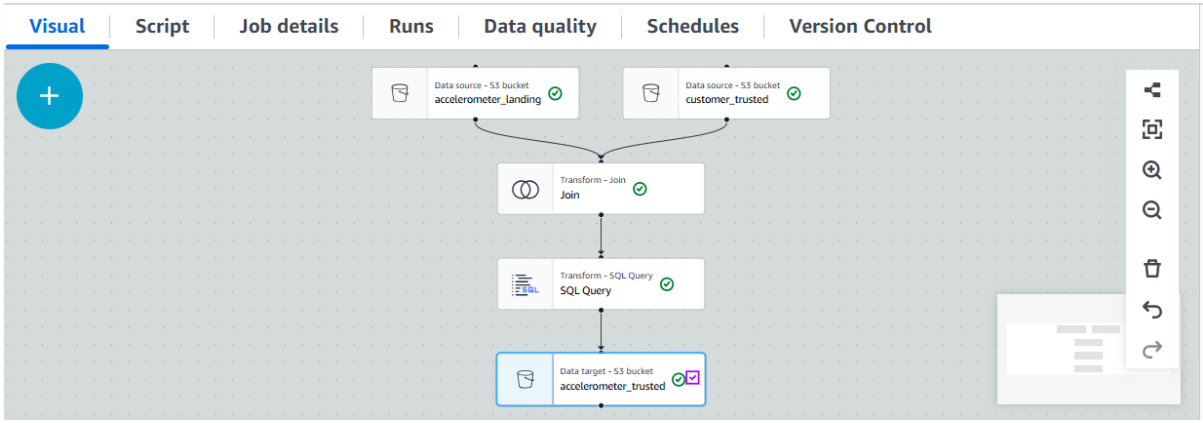
Customer_trusted

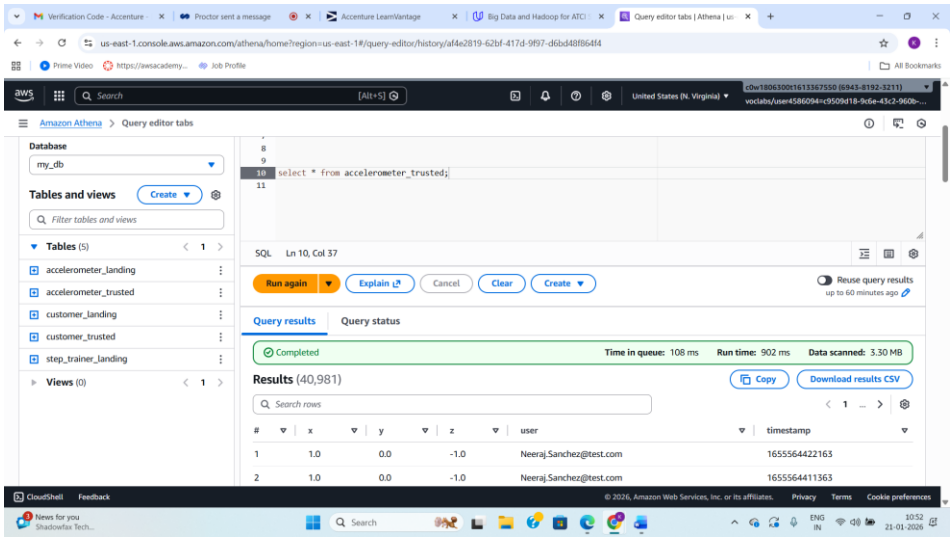


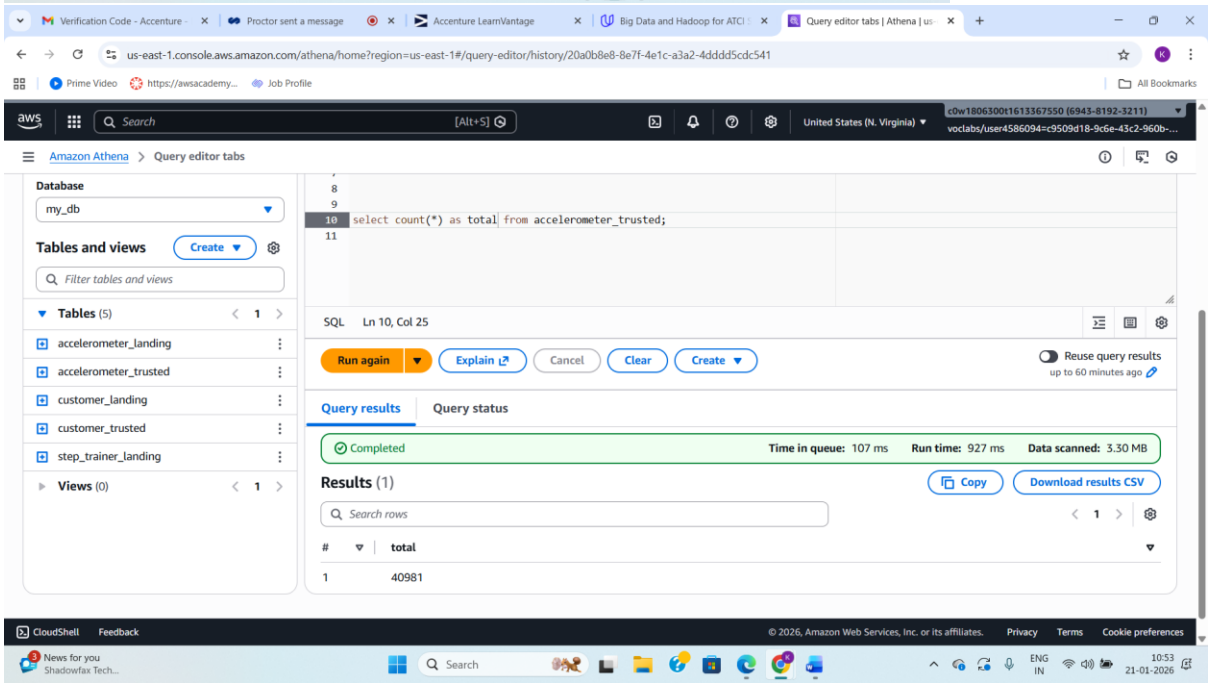


2.accelerometer_landing_to_trusted

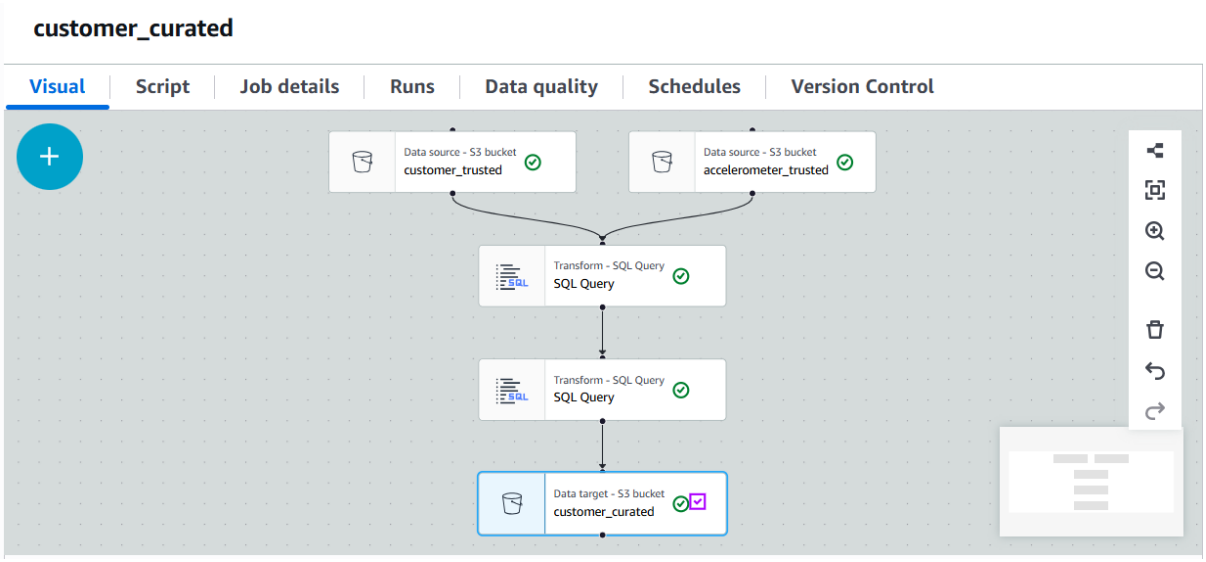
accelerometer_landing_to_trusted

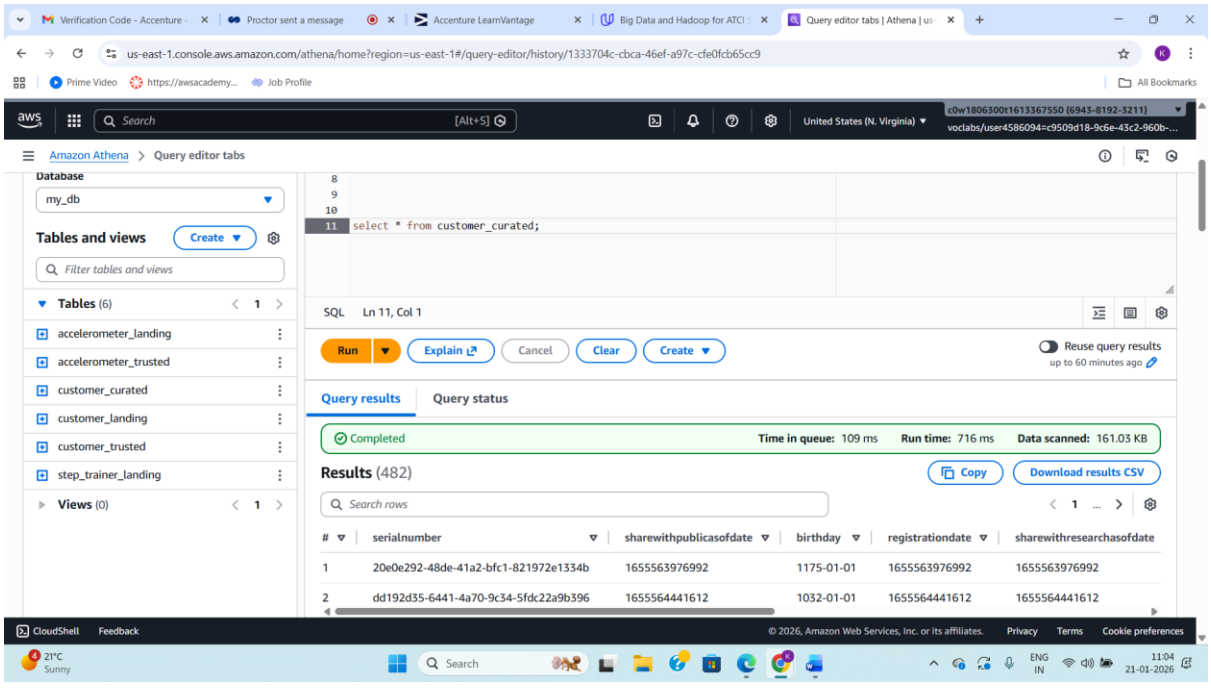


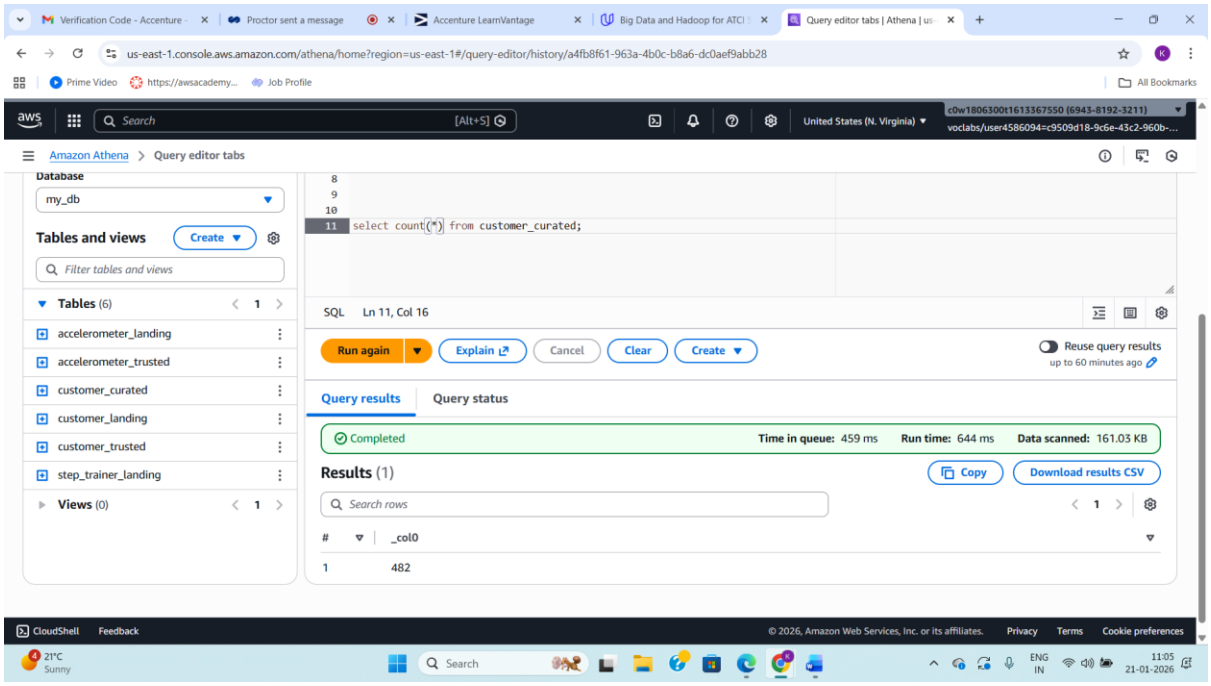




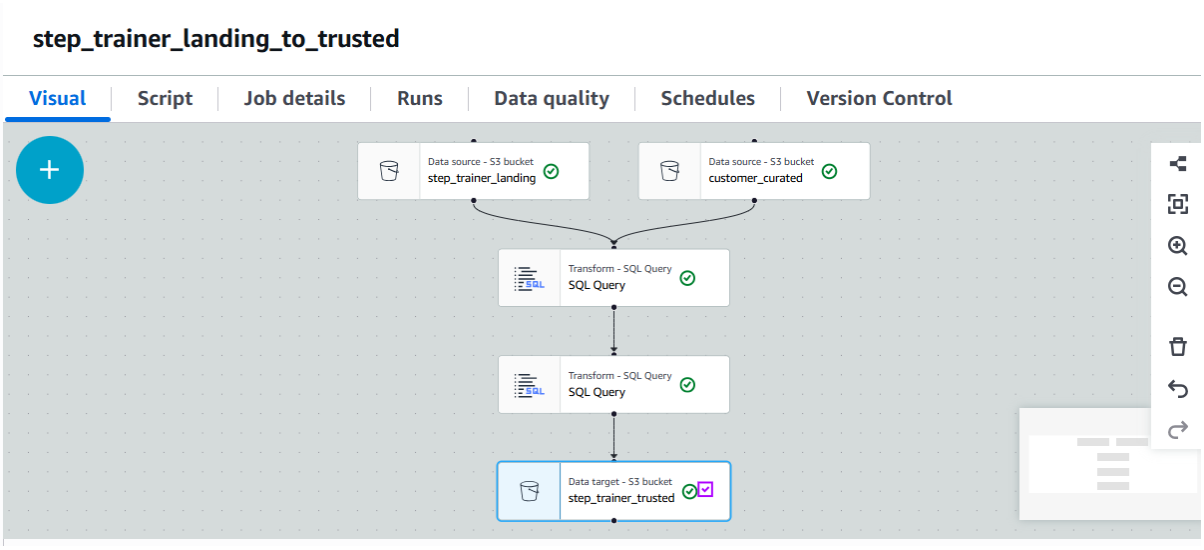
3.customer curated

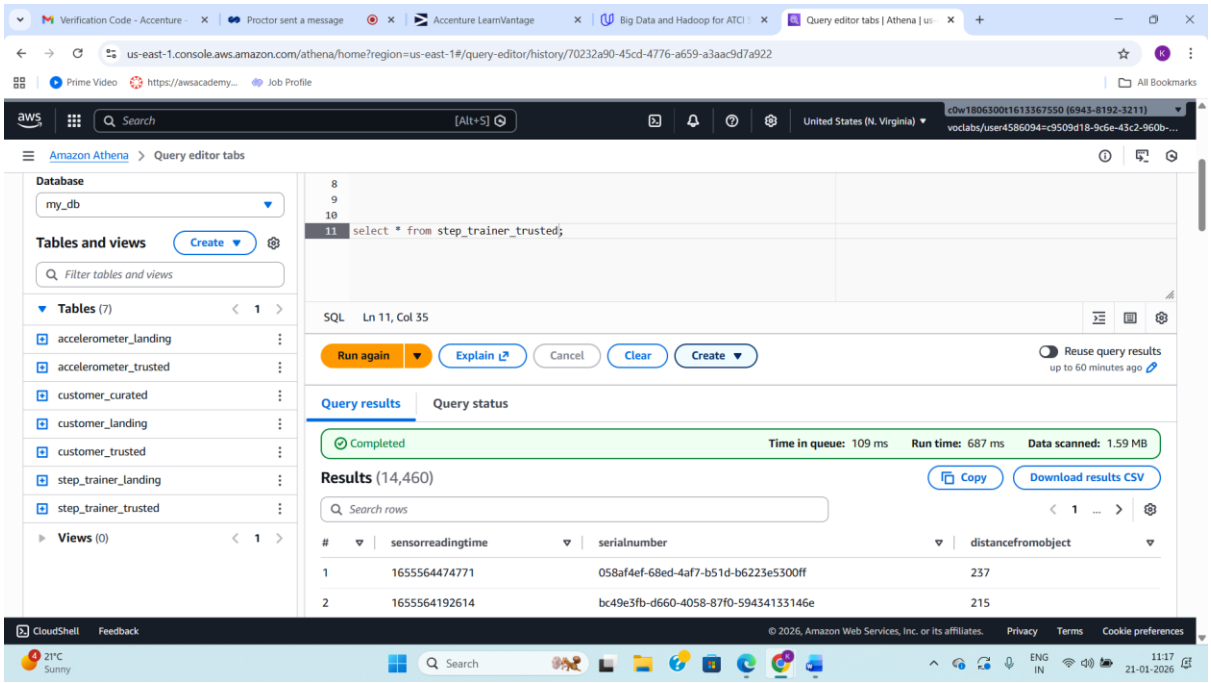






4.step_trainer_trusted




us-east-1.console.aws.amazon.com/athena/home?region=us-east-1#/query-editor/history/70232a90-45cd-4776-a659-a3aac9d7a922
Amazon Athena > Query editor tabs
Database
my_db
Tables and views
Create
Filter tables and views
Tables (7)
accelerometer_landing
accelerometer_trusted
customer_curated
customer_landing
customer_trusted
step_trainer_landing
step_trainer_trusted
Views (0)
8
9
10
11 select * from step_trainer_trusted;
SQL Ln 11, Col 35
Run again
Explain
Cancel
Clear
Create
Reuse query results
up to 60 minutes ago
Query results
Query status
Completed
Time in queue: 109 ms
Run time: 687 ms
Data scanned: 1.59 MB
Results (14,460)
Copy
Download results CSV
Search rows
sensorreadingtime serialnumber distancefromobject
1 1655564474771 058af4ef-68ed-4af7-b51d-b6223e5300ff 237
2 1655564192614 bc49e3fb-d660-4058-87f0-59434133146e 215
CloudShell
Feedback
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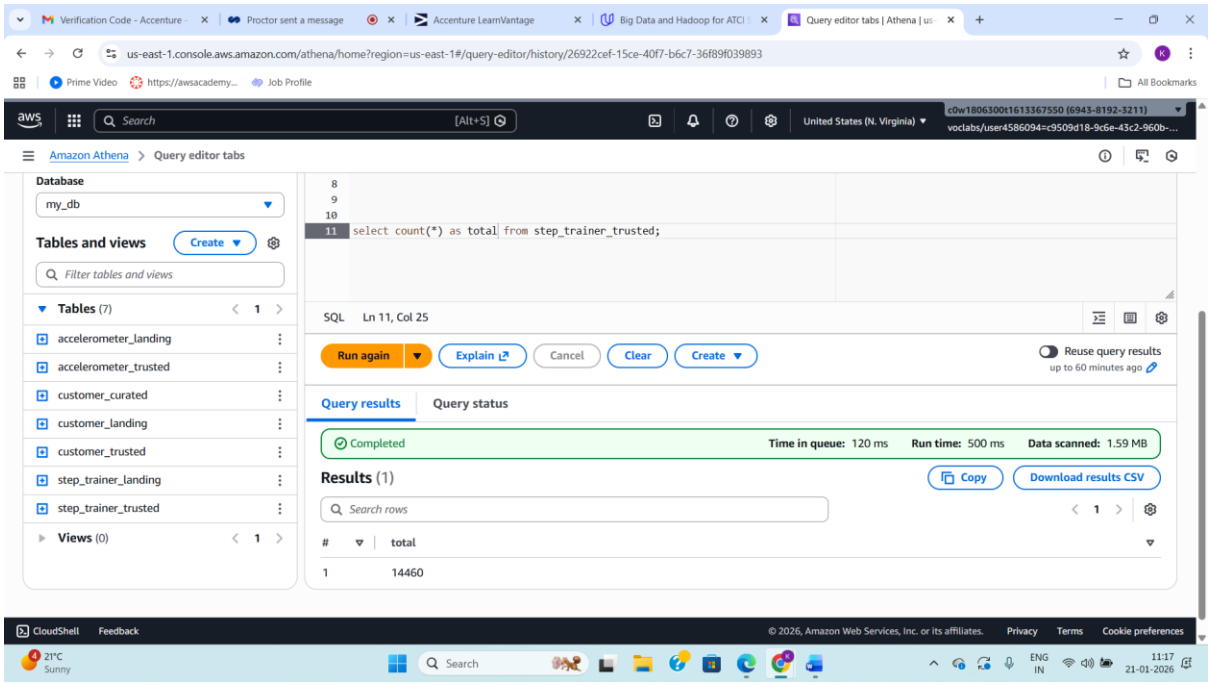
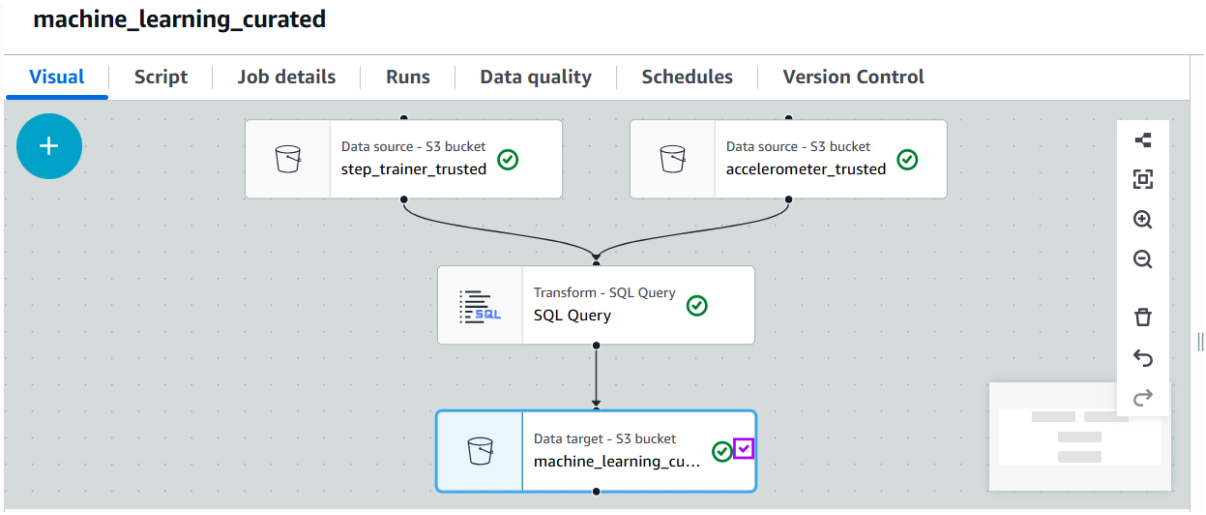
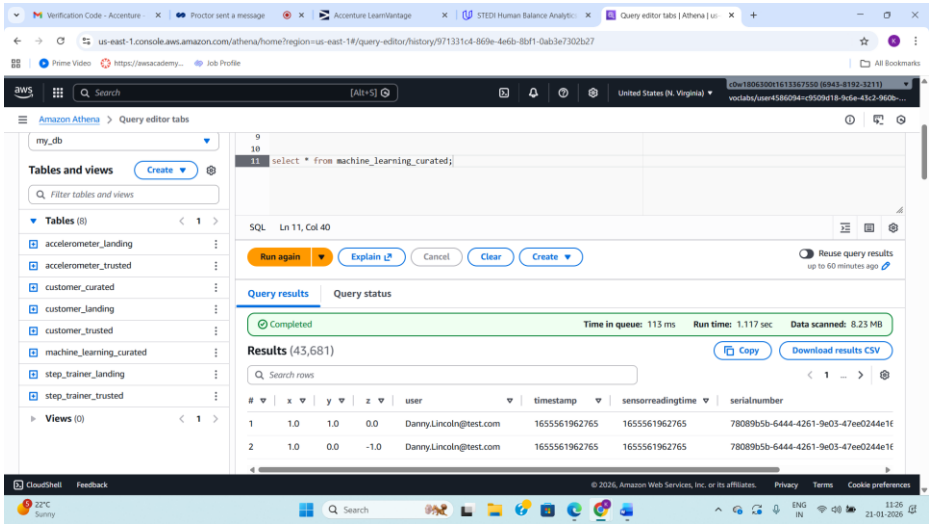
Privacy
Terms
Cookie preferences

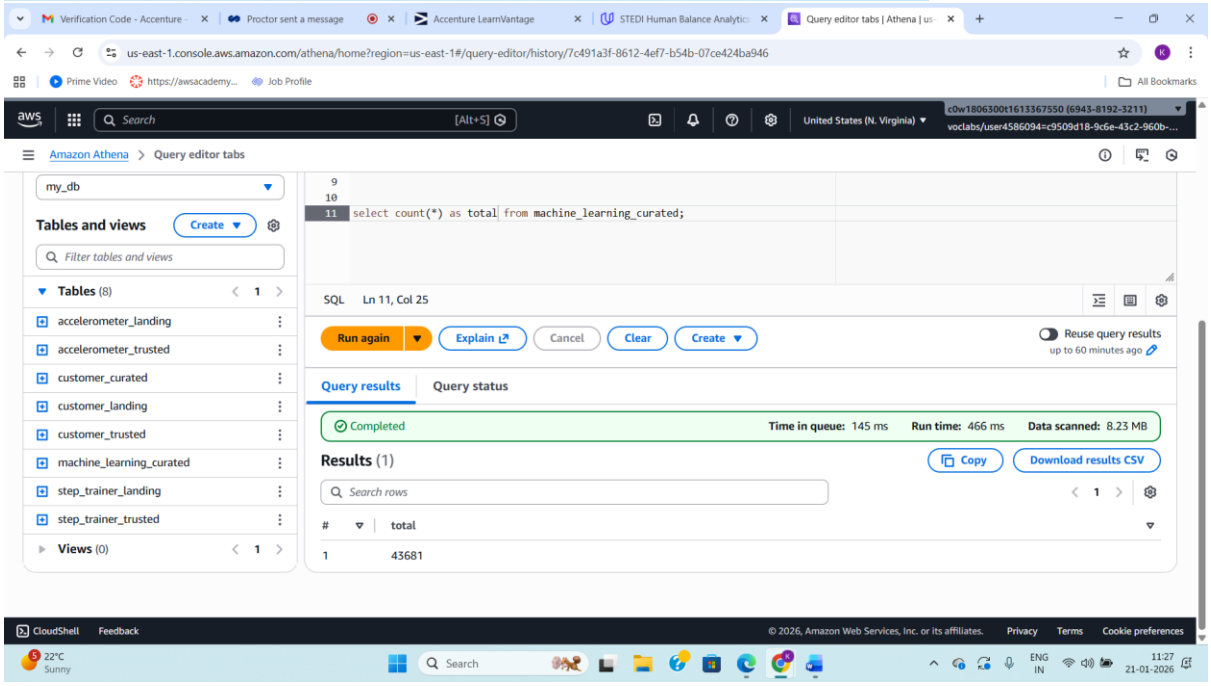

us-east-1.console.aws.amazon.com/athena/home?region=us-east-1#/query-editor/history/26922cef-15ce-40f7-b6c7-36f89f039893
Amazon Athena > Query editor tabs
Database
my_db
Tables and views
Create
Filter tables and views
Tables (7)
accelerometer_landing
accelerometer_trusted
customer_curated
customer_landing
customer_trusted
step_trainer_landing
step_trainer_trusted
Views (0)
8
9
10
11 select count(*) as total from step_trainer_trusted;
SQL Ln 11, Col 25
Run again
Explain
Cancel
Clear
Create
Reuse query results
up to 60 minutes ago
Query results
Query status
Completed
Time in queue: 120 ms
Run time: 500 ms
Data scanned: 1.59 MB
Results (1)
Copy
Download results CSV
Search rows
total
1 14460
CloudShell
Feedback
© 2026, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

5.machine_learning_curated

machine_learning_curated







PYTHON SCRIPTS

1.customer_landing_to_trusted.py

```
import sys
from awsglue.transforms import *
from awsglue.utils import getResolvedOptions
from pyspark.context import SparkContext
from awsglue.context import GlueContext
from awsglue.job import Job
from awsgluedq.transforms import EvaluateDataQuality
from awsglue import DynamicFrame

def sparkSqlQuery(glueContext, query, mapping, transformation_ctx) -> DynamicFrame:
    for alias, frame in mapping.items():
        frame.toDF().createOrReplaceTempView(alias)
    result = spark.sql(query)
    return DynamicFrame.fromDF(result, glueContext, transformation_ctx)
args = getResolvedOptions(sys.argv, ['JOB_NAME'])
sc = SparkContext()
glueContext = GlueContext(sc)
spark = glueContext.spark_session
job = Job(glueContext)
job.init(args['JOB_NAME'], args)

# Default ruleset used by all target nodes with data quality enabled
DEFAULT_DATA_QUALITY_RULESET = """
    Rules = [
        ColumnCount > 0
    ]
"""

# Script generated for node customer_landing
```

```
customer_landing_node1768971819631 =
glueContext.create_dynamic_frame.from_options(format_options={"multiLine": "false"},
connection_type="s3", format="json", connection_options={"paths": ["s3://stedi-uda-
project/landing/customer_landing/"], "recurse": True},
transformation_ctx="customer_landing_node1768971819631")


# Script generated for node SQL Query

SqlQuery0 = '''

select * from myDataSource

where shareWithResearchAsOfDate IS NOT NULL;

'''

SQLQuery_node1768971823092 = sparkSqlQuery(glueContext, query = SqlQuery0, mapping =
{"myDataSource":customer_landing_node1768971819631}, transformation_ctx =
"SQLQuery_node1768971823092")


# Script generated for node customer_trusted

EvaluateDataQuality().process_rows(frame=SQLQuery_node1768971823092,
ruleset=DEFAULT_DATA_QUALITY_RULESET, publishing_options={"dataQualityEvaluationContext":
"EvaluateDataQuality_node1768971763016", "enableDataQualityResultsPublishing": True},
additional_options={"dataQualityResultsPublishing.strategy": "BEST_EFFORT", "observations.scope":
"ALL"})

customer_trusted_node1768971825664 = glueContext.getSink(path="s3://stedi-uda-
project/landing/customer_landing/trusted/", connection_type="s3",
updateBehavior="UPDATE_IN_DATABASE", partitionKeys=[], enableUpdateCatalog=True,
transformation_ctx="customer_trusted_node1768971825664")

customer_trusted_node1768971825664.setCatalogInfo(catalogDatabase="my_db",catalogTableNam
e="customer_trusted")

customer_trusted_node1768971825664.setFormat("json")

customer_trusted_node1768971825664.writeFrame(SQLQuery_node1768971823092)

job.commit()
```

2.accelerometer_landing_to_trusted.py

```
import sys

from awsglue.transforms import *

from awsglue.utils import getResolvedOptions

from pyspark.context import SparkContext

from awsglue.context import GlueContext
```

```
from awsglue.job import Job
from awsgluedq.transforms import EvaluateDataQuality
from awsglue import DynamicFrame

def sparkSqlQuery(glueContext, query, mapping, transformation_ctx) -> DynamicFrame:
    for alias, frame in mapping.items():
        frame.toDF().createOrReplaceTempView(alias)
    result = spark.sql(query)
    return DynamicFrame.fromDF(result, glueContext, transformation_ctx)
args = getResolvedOptions(sys.argv, ['JOB_NAME'])
sc = SparkContext()
glueContext = GlueContext(sc)
spark = glueContext.spark_session
job = Job(glueContext)
job.init(args['JOB_NAME'], args)

# Default ruleset used by all target nodes with data quality enabled
DEFAULT_DATA_QUALITY_RULESET = """
    Rules = [
        ColumnCount > 0
    ]
"""

# Script generated for node accelerometer_landing
accelerometer_landing_node1768972441910 =
glueContext.create_dynamic_frame.from_options(format_options={"multiLine": "false"},
connection_type="s3", format="json", connection_options={"paths": ["s3://stedi-uda-
project/landing/accelerometer_landing/"], "recurse": True},
transformation_ctx="accelerometer_landing_node1768972441910")

# Script generated for node customer_trusted
customer_trusted_node1768972439414 =
glueContext.create_dynamic_frame.from_options(format_options={"multiLine": "false"},
```

```
connection_type="s3", format="json", connection_options={"paths": ["s3://stedi-uda-project/landing/customer_landing/trusted/"], "recurse": True}, transformation_ctx="customer_trusted_node1768972439414")


# Script generated for node Join

Join_node1768972445017 = Join.apply(frame1=accelerometer_landing_node1768972441910, frame2=customer_trusted_node1768972439414, keys1=["user"], keys2=["email"], transformation_ctx="Join_node1768972445017")


# Script generated for node SQL Query

SqlQuery0 = '''

select DISTINCT x,y,z,user,timestamp from myDataSource;


'''

SQLQuery_node1768972446638 = sparkSqlQuery(glueContext, query = SqlQuery0, mapping = {"myDataSource":Join_node1768972445017}, transformation_ctx = "SQLQuery_node1768972446638")


# Script generated for node accelerometer_trusted

EvaluateDataQuality().process_rows(frame=SQLQuery_node1768972446638, ruleset=DEFAULT_DATA_QUALITY_RULESET, publishing_options={"dataQualityEvaluationContext": "EvaluateDataQuality_node1768972399765", "enableDataQualityResultsPublishing": True}, additional_options={"dataQualityResultsPublishing.strategy": "BEST_EFFORT", "observations.scope": "ALL"})

accelerometer_trusted_node1768972450560 = glueContext.getSink(path="s3://stedi-uda-project/landing/accelerometer_landing/trusted/", connection_type="s3", updateBehavior="UPDATE_IN_DATABASE", partitionKeys=[], enableUpdateCatalog=True, transformation_ctx="accelerometer_trusted_node1768972450560")

accelerometer_trusted_node1768972450560.setCatalogInfo(catalogDatabase="my_db",catalogTableName="accelerometer_trusted")

accelerometer_trusted_node1768972450560.setFormat("json")

accelerometer_trusted_node1768972450560.writeFrame(SQLQuery_node1768972446638)

job.commit()
```

3.customer_curated.py

```
import sys

from awsglue.transforms import *
```

```
from awsglue.utils import getResolvedOptions
from pyspark.context import SparkContext
from awsglue.context import GlueContext
from awsglue.job import Job
from awsgluedq.transforms import EvaluateDataQuality
from awsglue import DynamicFrame

def sparkSqlQuery(glueContext, query, mapping, transformation_ctx) -> DynamicFrame:
    for alias, frame in mapping.items():
        frame.toDF().createOrReplaceTempView(alias)
    result = spark.sql(query)
    return DynamicFrame.fromDF(result, glueContext, transformation_ctx)
args = getResolvedOptions(sys.argv, ['JOB_NAME'])
sc = SparkContext()
glueContext = GlueContext(sc)
spark = glueContext.spark_session
job = Job(glueContext)
job.init(args['JOB_NAME'], args)

# Default ruleset used by all target nodes with data quality enabled
DEFAULT_DATA_QUALITY_RULESET = """
    Rules = [
        ColumnCount > 0
    ]
"""

# Script generated for node accelerometer_trusted
accelerometer_trusted_node1768973088768 =
glueContext.create_dynamic_frame.from_options(format_options={"multiLine": "false"},
connection_type="s3", format="json", connection_options={"paths": ["s3://stedi-uda-
project/landing/accelerometer_landing/trusted/"], "recurse": True},
transformation_ctx="accelerometer_trusted_node1768973088768")
```

```
# Script generated for node customer_trusted

customer_trusted_node1768973090716 =
glueContext.create_dynamic_frame.from_options(format_options={"multiLine": "false"},
connection_type="s3", format="json", connection_options={"paths": ["s3://stedi-uda-
project/landing/customer_landing/trusted/"], "recurse": True},
transformation_ctx="customer_trusted_node1768973090716")


# Script generated for node SQL Query

SqlQuery0 = '''

select * from a join c on a.user=c.email;


'''

SQLQuery_node1768973093934 = sparkSqlQuery(glueContext, query = SqlQuery0, mapping =
{"c":customer_trusted_node1768973090716, "a":accelerometer_trusted_node1768973088768},
transformation_ctx = "SQLQuery_node1768973093934")


# Script generated for node SQL Query

SqlQuery1 = '''

select distinct

 serialnumber,

sharewithpublicasofdate,

birthday,

registrationdate,

sharewithresearchasofdate,

customername,

email,

lastupdatedate,

phone,

sharewithfriendsasofdate

from myDataSource;


'''
```

```
SQLQuery_node1768973095370 = sparkSqlQuery(glueContext, query = SqlQuery1, mapping = {"myDataSource":SQLQuery_node1768973093934}, transformation_ctx = "SQLQuery_node1768973095370")


# Script generated for node customer_curated

EvaluateDataQuality().process_rows(frame=SQLQuery_node1768973095370, ruleset=DEFAULT_DATA_QUALITY_RULESET, publishing_options={"dataQualityEvaluationContext": "EvaluateDataQuality_node1768973060146", "enableDataQualityResultsPublishing": True}, additional_options={"dataQualityResultsPublishing.strategy": "BEST_EFFORT", "observations.scope": "ALL"})

customer_curated_node1768973099281 = glueContext.getSink(path="s3://stedi-uda-project/landing/customer_landing/curated/", connection_type="s3", updateBehavior="UPDATE_IN_DATABASE", partitionKeys=[], enableUpdateCatalog=True, transformation_ctx="customer_curated_node1768973099281")

customer_curated_node1768973099281.setCatalogInfo(catalogDatabase="my_db",catalogTableName="customer_curated")

customer_curated_node1768973099281.setFormat("json")

customer_curated_node1768973099281.writeFrame(SQLQuery_node1768973095370)

job.commit()
```

4.step_trainer_landing_to_trusted.py

```
import sys

from awsglue.transforms import *

from awsglue.utils import getResolvedOptions

from pyspark.context import SparkContext

from awsglue.context import GlueContext

from awsglue.job import Job

from awsgluedq.transforms import EvaluateDataQuality

from awsglue import DynamicFrame


def sparkSqlQuery(glueContext, query, mapping, transformation_ctx) -> DynamicFrame:
    for alias, frame in mapping.items():
        frame.toDF().createOrReplaceTempView(alias)
    result = spark.sql(query)
    return DynamicFrame.fromDF(result, glueContext, transformation_ctx)
```

```
args = getResolvedOptions(sys.argv, ['JOB_NAME'])

sc = SparkContext()

glueContext = GlueContext(sc)

spark = glueContext.spark_session

job = Job(glueContext)

job.init(args['JOB_NAME'], args)


# Default ruleset used by all target nodes with data quality enabled

DEFAULT_DATA_QUALITY_RULESET = """

   Rules = [

      ColumnCount > 0

   ]

"""


# Script generated for node customer_curated

customer_curated_node1768973786330 =
glueContext.create_dynamic_frame.from_options(format_options={"multiLine": "false"},
connection_type="s3", format="json", connection_options={"paths": ["s3://stedi-uda-
project/landing/customer_landing/curated/"], "recurse": True},
transformation_ctx="customer_curated_node1768973786330")


# Script generated for node step_trainer_landing

step_trainer_landing_node1768973787902 =
glueContext.create_dynamic_frame.from_options(format_options={"multiLine": "false"},
connection_type="s3", format="json", connection_options={"paths": ["s3://stedi-uda-
project/landing/step_trainer_landing/"], "recurse": True},
transformation_ctx="step_trainer_landing_node1768973787902")


# Script generated for node SQL Query

SqlQuery0 = '''

select s.sensorReadingTime,

s.serialNumber,

s.distanceFromObject from s join c

on s.serialnumber=c.serialnumber;
```

'''

SQLQuery_node1768973791218 = sparkSqlQuery(glueContext, query = SqlQuery0, mapping = {"s":step_trainer_landing_node1768973787902, "c":customer_curated_node1768973786330}, transformation_ctx = "SQLQuery_node1768973791218")

Script generated for node SQL Query

SqlQuery1 = '''

select distinct sensorReadingTime,

serialNumber,

distanceFromObject from myDataSource;

'''

SQLQuery_node1768973792561 = sparkSqlQuery(glueContext, query = SqlQuery1, mapping = {"myDataSource":SQLQuery_node1768973791218}, transformation_ctx = "SQLQuery_node1768973792561")

Script generated for node step_trainer_trusted

EvaluateDataQuality().process_rows(frame=SQLQuery_node1768973792561, ruleset=DEFAULT_DATA_QUALITY_RULESET, publishing_options={"dataQualityEvaluationContext": "EvaluateDataQuality_node1768973743058", "enableDataQualityResultsPublishing": True}, additional_options={"dataQualityResultsPublishing.strategy": "BEST_EFFORT", "observations.scope": "ALL"})

step_trainer_trusted_node1768973796390 = glueContext.getSink(path="s3://stedi-uda-project/landing/step_trainer_landing/trusted/", connection_type="s3", updateBehavior="UPDATE_IN_DATABASE", partitionKeys=[], enableUpdateCatalog=True, transformation_ctx="step_trainer_trusted_node1768973796390")

step_trainer_trusted_node1768973796390.setCatalogInfo(catalogDatabase="my_db",catalogTableName="step_trainer_trusted")

step_trainer_trusted_node1768973796390.setFormat("json")

step_trainer_trusted_node1768973796390.writeFrame(SQLQuery_node1768973792561)

job.commit()

5.machine_learning_curated.py

import sys

from awsglue.transforms import *

```
from awsglue.utils import getResolvedOptions
from pyspark.context import SparkContext
from awsglue.context import GlueContext
from awsglue.job import Job
from awsgluedq.transforms import EvaluateDataQuality
from awsglue import DynamicFrame

def sparkSqlQuery(glueContext, query, mapping, transformation_ctx) -> DynamicFrame:
    for alias, frame in mapping.items():
        frame.toDF().createOrReplaceTempView(alias)
    result = spark.sql(query)
    return DynamicFrame.fromDF(result, glueContext, transformation_ctx)
args = getResolvedOptions(sys.argv, ['JOB_NAME'])
sc = SparkContext()
glueContext = GlueContext(sc)
spark = glueContext.spark_session
job = Job(glueContext)
job.init(args['JOB_NAME'], args)

# Default ruleset used by all target nodes with data quality enabled
DEFAULT_DATA_QUALITY_RULESET = """
    Rules = [
        ColumnCount > 0
    ]
"""

# Script generated for node customer_curated
customer_curated_node1768973786330 =
glueContext.create_dynamic_frame.from_options(format_options={"multiLine": "false"},
connection_type="s3", format="json", connection_options={"paths": ["s3://stedi-uda-
project/landing/customer_landing/curated/"], "recurse": True},
transformation_ctx="customer_curated_node1768973786330")
```

```
# Script generated for node step_trainer_landing

step_trainer_landing_node1768973787902 =
glueContext.create_dynamic_frame.from_options(format_options={"multiLine": "false"},
connection_type="s3", format="json", connection_options={"paths": ["s3://stedi-uda-
project/landing/step_trainer_landing/"], "recurse": True},
transformation_ctx="step_trainer_landing_node1768973787902")


# Script generated for node SQL Query

SqlQuery0 = '''

select s.sensorReadingTime,

s.serialNumber,

s.distanceFromObject from s join c

on s.serialnumber=c.serialnumber;


'''

SQLQuery_node1768973791218 = sparkSqlQuery(glueContext, query = SqlQuery0, mapping =
{"s":step_trainer_landing_node1768973787902, "c":customer_curated_node1768973786330},
transformation_ctx = "SQLQuery_node1768973791218")


# Script generated for node SQL Query

SqlQuery1 = '''

select distinct sensorReadingTime,

serialNumber,

distanceFromObject from myDataSource;


'''

SQLQuery_node1768973792561 = sparkSqlQuery(glueContext, query = SqlQuery1, mapping =
{"myDataSource":SQLQuery_node1768973791218}, transformation_ctx =
"SQLQuery_node1768973792561")


# Script generated for node step_trainer_trusted

EvaluateDataQuality().process_rows(frame=SQLQuery_node1768973792561,
ruleset=DEFAULT_DATA_QUALITY_RULESET, publishing_options={"dataQualityEvaluationContext":
```

"EvaluateDataQuality_node1768973743058", "enableDataQualityResultsPublishing": True}, additional_options={"dataQualityResultsPublishing.strategy": "BEST_EFFORT", "observations.scope": "ALL"})

step_trainer_trusted_node1768973796390 = glueContext.getSink(path="s3://stedi-uda-project/landing/step_trainer_landing/trusted/", connection_type="s3", updateBehavior="UPDATE_IN_DATABASE", partitionKeys=[], enableUpdateCatalog=True, transformation_ctx="step_trainer_trusted_node1768973796390")

step_trainer_trusted_node1768973796390.setCatalogInfo(catalogDatabase="my_db",catalogTableName="step_trainer_trusted")

step_trainer_trusted_node1768973796390.setFormat("json")

step_trainer_trusted_node1768973796390.writeFrame(SQLQuery_node1768973792561)

job.commit()