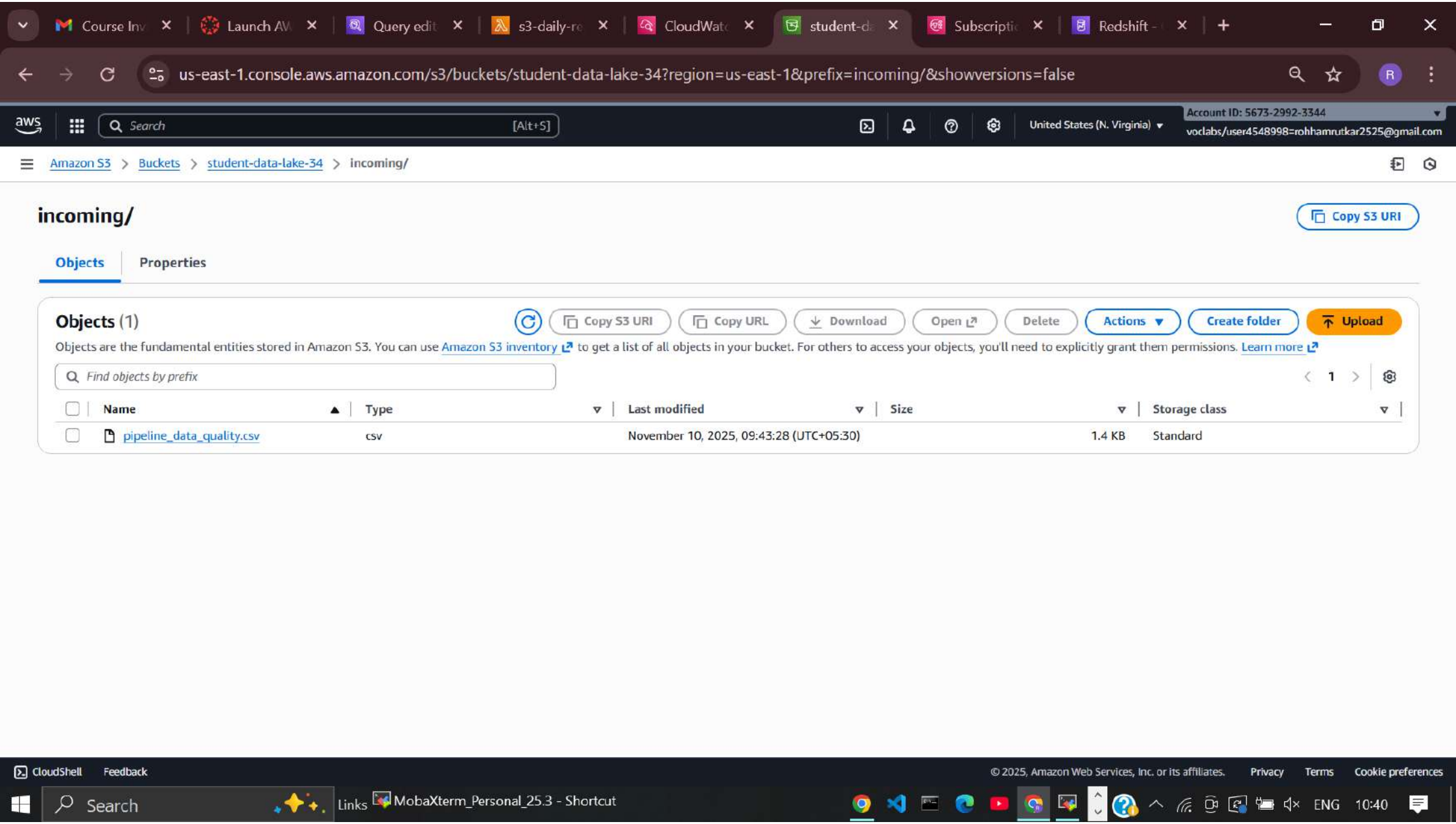
us-east-1.console.aws.amazon.com/s3/buckets/student-data-lake-34?region=us-east-1&prefix=incoming/&showversions=false
Search [Alt+S]
United States (N. Virginia)
Account ID: 5673-2992-3344
voclabs/user4548998=rohhamrutkar2525@gmail.com
Amazon S3 > Buckets > student-data-lake-34 > incoming/
incoming/
Copy S3 URI
Objects
Properties
Objects (1)
Copy S3 URI
Copy URL
Download
Open
Delete
Actions
Create folder
Upload
Objects are the fundamental entities stored in Amazon S3. You can use Amazon S3 inventory to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. Learn more
Find objects by prefix
Name
Type
Last modified
Size
Storage class
pipeline_data_quality.csv
csv
November 10, 2025, 09:43:28 (UTC+05:30)
1.4 KB
Standard
CloudShell
Feedback
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Links
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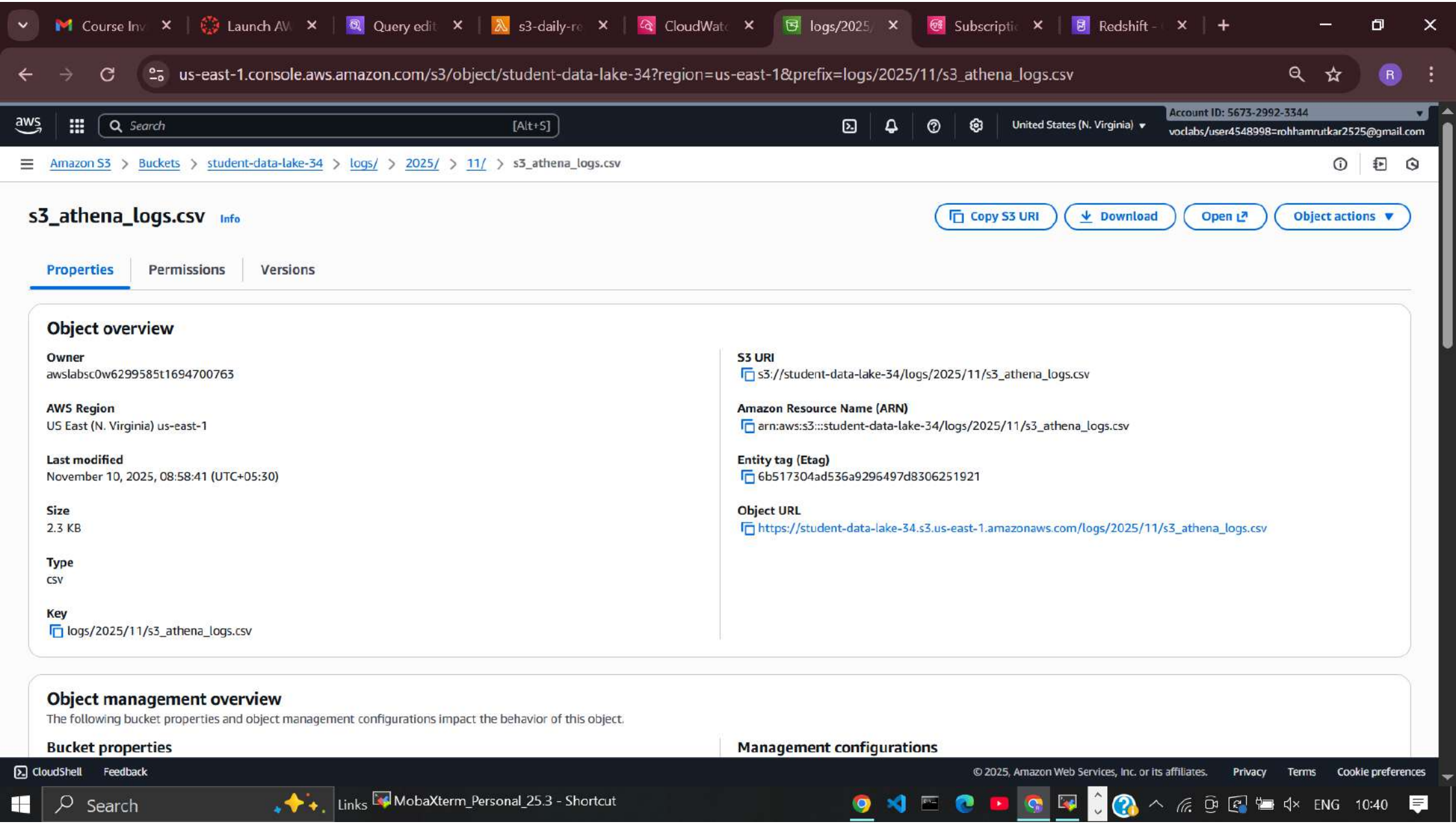
ENG
10:40


us-east-1.console.aws.amazon.com/s3/object/student-data-lake-34?region=us-east-1&prefix=logs/2025/11/s3_athena_logs.csv
Search [Alt+S]
United States (N. Virginia)
Account ID: 5673-2992-3344
voclabs/user4548998=rohhamrutkar2525@gmail.com
Amazon S3 > Buckets > student-data-lake-34 > logs/ > 2025/ > 11/ > s3_athena_logs.csv
s3_athena_logs.csv Info
Copy S3 URI
Download
Open
Object actions
Properties
Permissions
Versions
Object overview
Owner
awslabsc0w6299585t1694700763
AWS Region
US East (N. Virginia) us-east-1
Last modified
November 10, 2025, 08:58:41 (UTC+05:30)
Size
2.3 KB
Type
csv
Key
logs/2025/11/s3_athena_logs.csv
S3 URI
s3://student-data-lake-34/logs/2025/11/s3_athena_logs.csv
Amazon Resource Name (ARN)
arn:aws:s3:::student-data-lake-34/logs/2025/11/s3_athena_logs.csv
Entity tag (Etag)
6b517304ad536a9296497d8306251921
Object URL
https://student-data-lake-34.s3.us-east-1.amazonaws.com/logs/2025/11/s3_athena_logs.csv
Object management overview
The following bucket properties and object management configurations impact the behavior of this object.
Bucket properties
Management configurations
CloudShell
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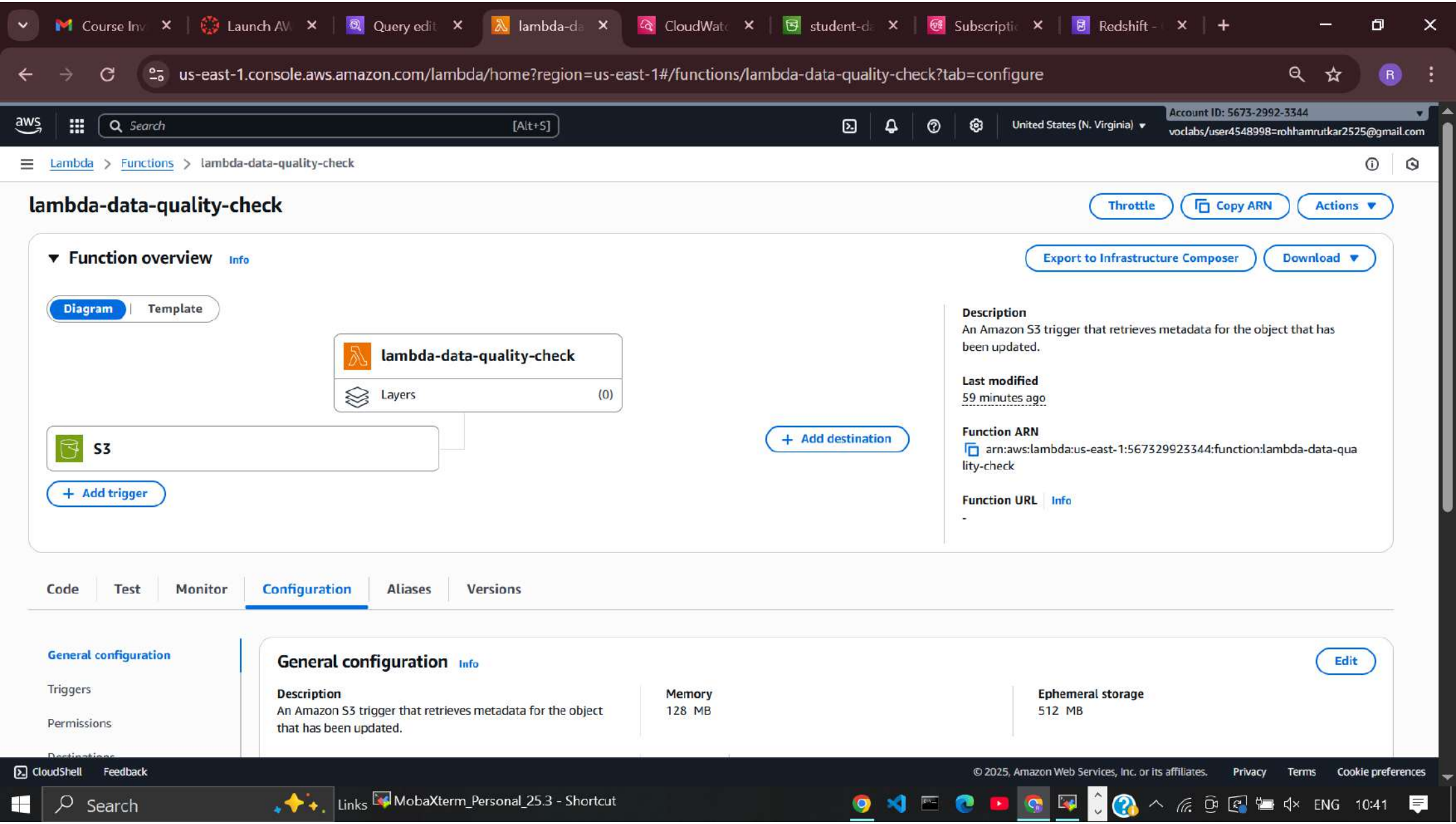
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lambda-data-quality-check?tab=configure
Search [Alt+S]
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Lambda > Functions > lambda-data-quality-check
lambda-data-quality-check
Throttle
Copy ARN
Actions
Function overview Info
Export to Infrastructure Composer
Download
Diagram | Template
lambda-data-quality-check
Layers (0)
S3
Add trigger
Add destination
Description
An Amazon S3 trigger that retrieves metadata for the object that has been updated.
Last modified
59 minutes ago
Function ARN
arn:aws:lambda:us-east-1:567329923344:function:lambda-data-quality-check
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
General configuration
Triggers
Permissions
General configuration Info
Edit
Description
An Amazon S3 trigger that retrieves metadata for the object that has been updated.
Memory
128 MB
Ephemeral storage
512 MB
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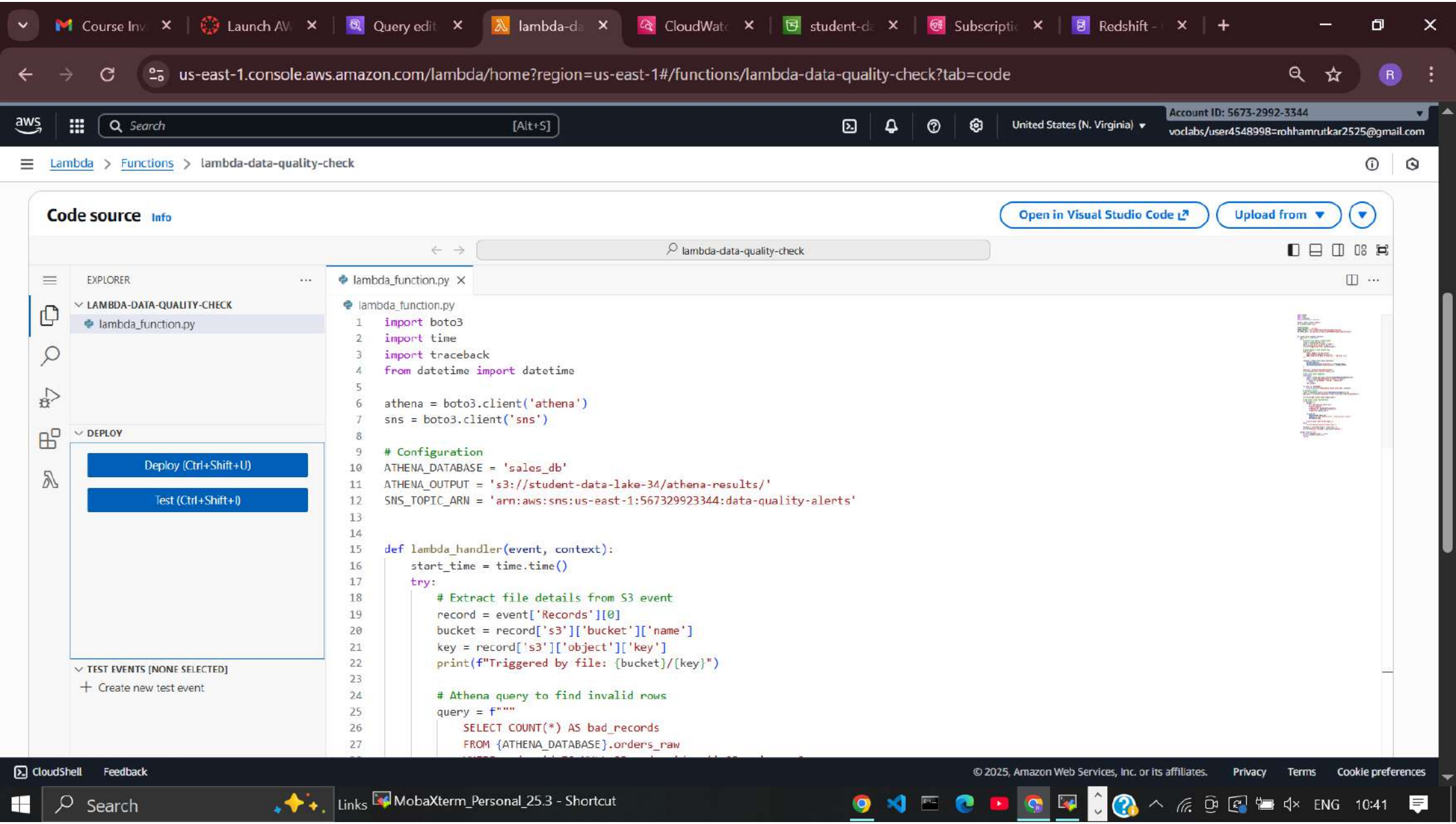
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lambda-data-quality-check?tab=code
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LAMBDA-DATA-QUALITY-CHECK
lambda_function.py
DEPLOY
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
TEST EVENTS [NONE SELECTED]
Create new test event
lambda_function.py
import boto3
import time
import traceback
from datetime import datetime
athena = boto3.client('athena')
sns = boto3.client('sns')
# Configuration
ATHENA_DATABASE = 'sales_db'
ATHENA_OUTPUT = 's3://student-data-lake-34/athena-results/'
SNS_TOPIC_ARN = 'arn:aws:sns:us-east-1:567329923344:data-quality-alerts'
def lambda_handler(event, context):
start_time = time.time()
try:
# Extract file details from S3 event
record = event['Records'][0]
bucket = record['s3']['bucket']['name']
key = record['s3']['object']['key']
print(f"Triggered by file: {bucket}/{key}")
# Athena query to find invalid rows
query = f"""
SELECT COUNT(*) AS bad_records
FROM {ATHENA_DATABASE}.orders_raw
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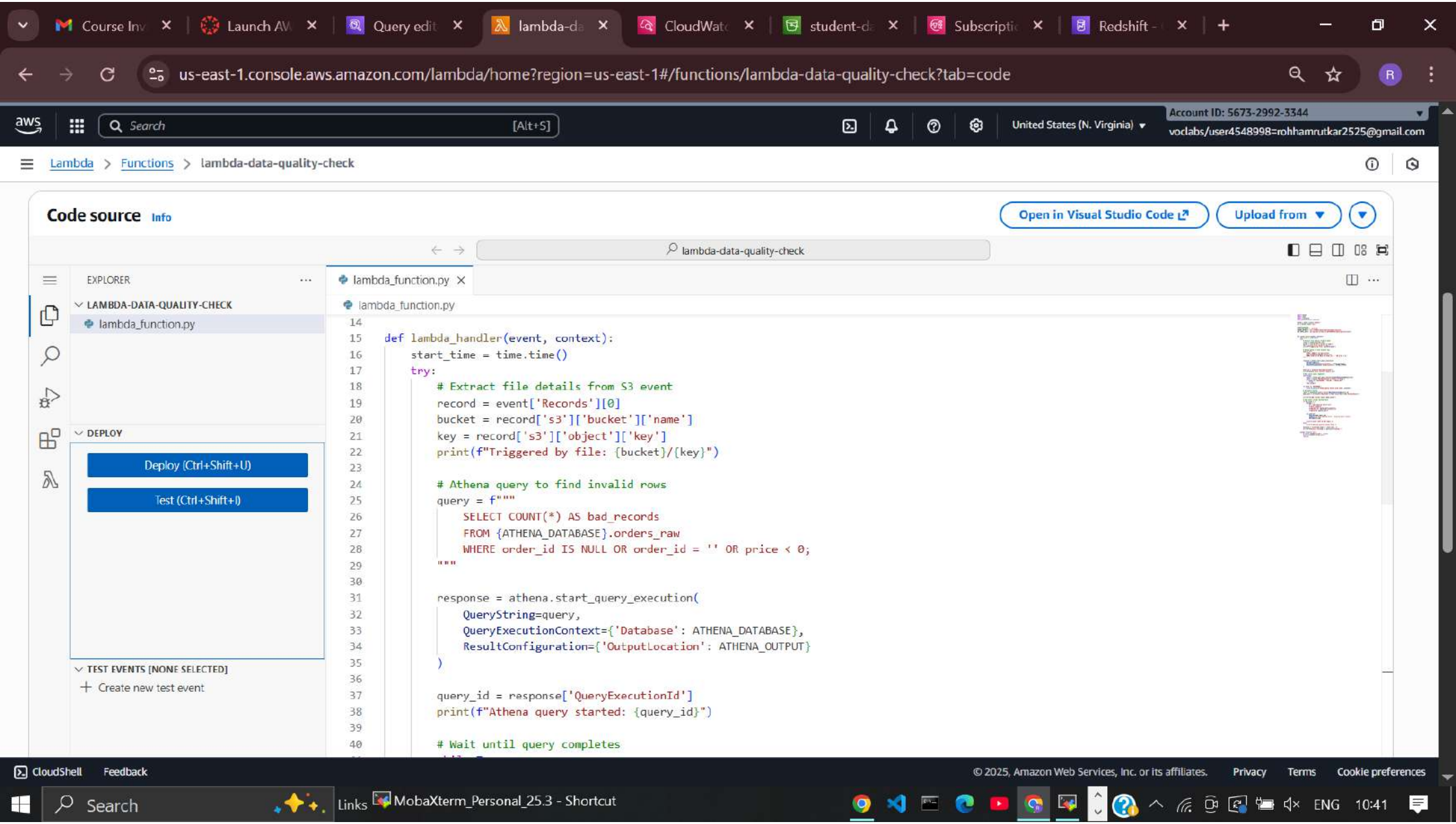
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lambda-data-quality-check?tab=code
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lambda_function.py
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Test (Ctrl+Shift+I)
TEST EVENTS [NONE SELECTED]
Create new test event
lambda_function.py
14
15 def lambda_handler(event, context):
16 start_time = time.time()
17 try:
18 # Extract file details from S3 event
19 record = event['Records'][0]
20 bucket = record['s3']['bucket']['name']
21 key = record['s3']['object']['key']
22 print(f"Triggered by file: {bucket}/{key}")
23
24 # Athena query to find invalid rows
25 query = f"""
26 SELECT COUNT(*) AS bad_records
27 FROM {ATHENA_DATABASE}.orders_raw
28 WHERE order_id IS NULL OR order_id = '' OR price < 0;
29 """
30
31 response = athena.start_query_execution(
32 QueryString=query,
33 QueryExecutionContext={'Database': ATHENA_DATABASE},
34 ResultConfiguration={'OutputLocation': ATHENA_OUTPUT}
35)
36
37 query_id = response['QueryExecutionId']
38 print(f"Athena query started: {query_id}")
39
40 # Wait until query completes
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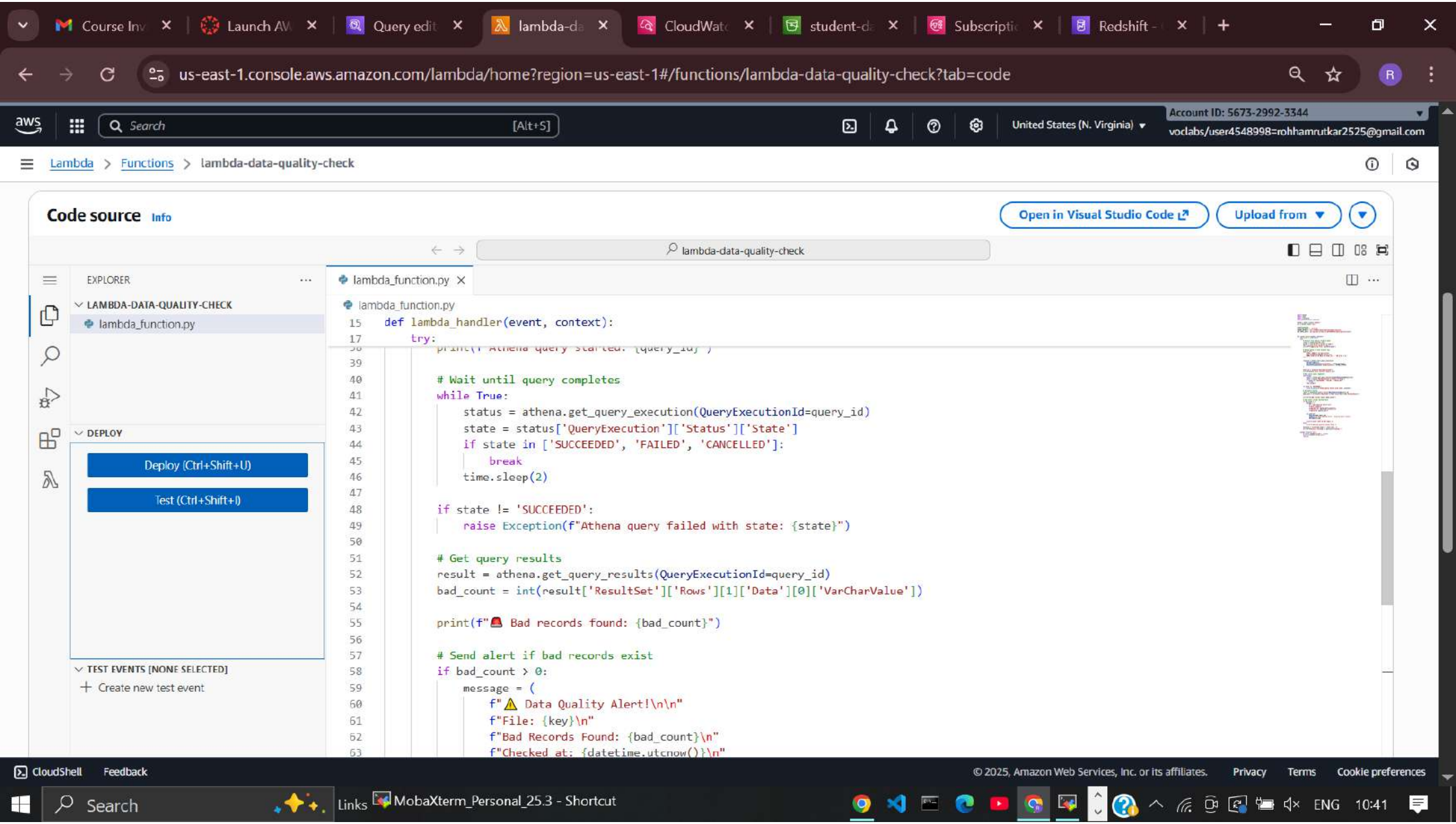
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lambda-data-quality-check?tab=code
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Lambda > Functions > lambda-data-quality-check
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LAMBDA-DATA-QUALITY-CHECK
lambda_function.py
DEPLOY
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
TEST EVENTS [NONE SELECTED]
Create new test event
lambda_function.py
def lambda_handler(event, context):
try:
# Wait until query completes
while True:
status = athena.get_query_execution(QueryExecutionId=query_id)
state = status['QueryExecution']['Status']['State']
if state in ['SUCCEEDED', 'FAILED', 'CANCELLED']:
break
time.sleep(2)
if state != 'SUCCEEDED':
raise Exception(f"Athena query failed with state: {state}")
# Get query results
result = athena.get_query_results(QueryExecutionId=query_id)
bad_count = int(result['ResultSet']['Rows'][1]['Data'][0]['VarCharValue'])
print(f"🚨 Bad records found: {bad_count}")
# Send alert if bad records exist
if bad_count > 0:
message = (
f"⚠️ Data Quality Alert!\n\n"
f"File: {key}\n"
f"Bad Records Found: {bad_count}\n"
f"Checked at: {datetime.utcnow()}\n"
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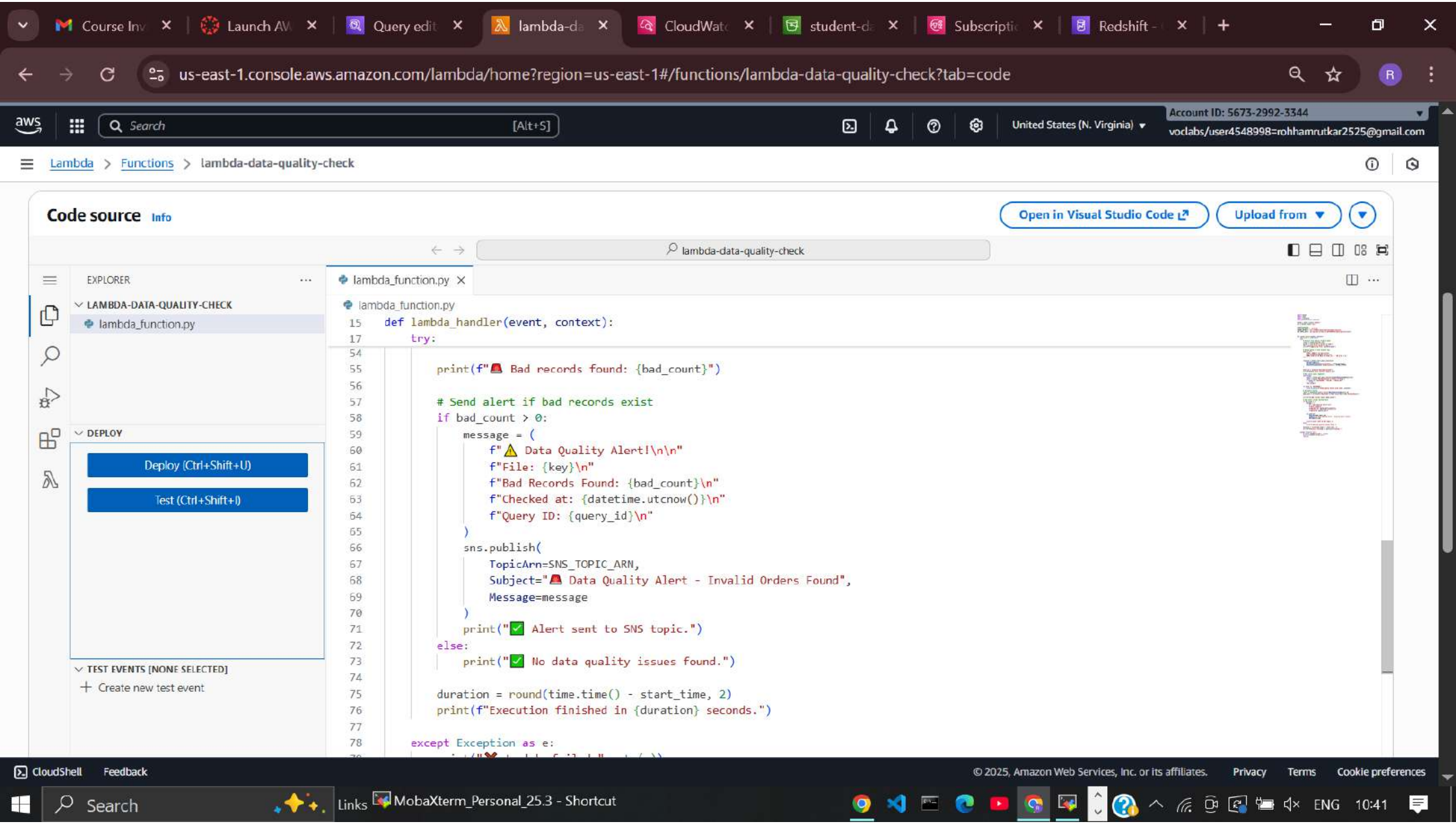
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lambda-data-quality-check?tab=code
Lambda > Functions > lambda-data-quality-check
Code source Info
Open in Visual Studio Code
Upload from
lambda-data-quality-check
EXPLORER
LAMBDA-DATA-QUALITY-CHECK
lambda_function.py
DEPLOY
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
TEST EVENTS [NONE SELECTED]
Create new test event
lambda_function.py
def lambda_handler(event, context):
try:
print(f"🚨 Bad records found: {bad_count}")
# Send alert if bad records exist
if bad_count > 0:
message = (
f"⚠️ Data Quality Alert!\n\n"
f"File: {key}\n"
f"Bad Records Found: {bad_count}\n"
f"Checked at: {datetime.utcnow()}\n"
f"Query ID: {query_id}\n"
)
sns.publish(
TopicArn=SNS_TOPIC_ARN,
Subject="🚨 Data Quality Alert - Invalid Orders Found",
Message=message
)
print("✅ Alert sent to SNS topic.")
else:
print("✅ No data quality issues found.")
duration = round(time.time() - start_time, 2)
print(f"Execution finished in {duration} seconds.")
except Exception as e:
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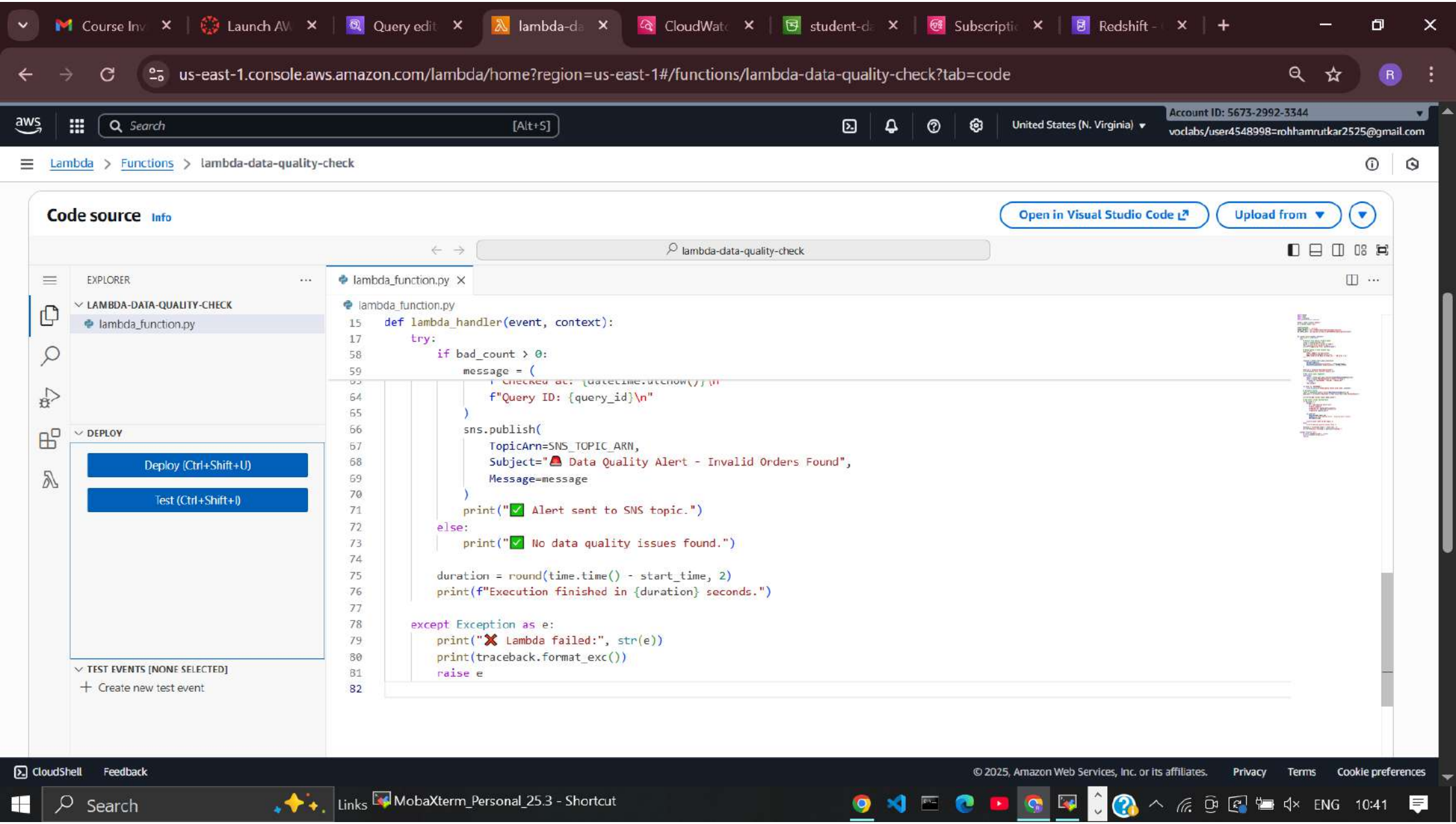
10:41


us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lambda-data-quality-check?tab=code
Lambda > Functions > lambda-data-quality-check
Code source Info
Open in Visual Studio Code
Upload from
EXPLORER
LAMBDA-DATA-QUALITY-CHECK
lambda_function.py
DEPLOY
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
TEST EVENTS [NONE SELECTED]
Create new test event
def lambda_handler(event, context):
try:
if bad_count > 0:
message = (
f"Query ID: {query_id}\n"
)
sns.publish(
TopicArn=SNS_TOPIC_ARN,
Subject="🚨 Data Quality Alert - Invalid Orders Found",
Message=message
)
print("✅ Alert sent to SNS topic.")
else:
print("✅ No data quality issues found.")
duration = round(time.time() - start_time, 2)
print(f"Execution finished in {duration} seconds.")
except Exception as e:
print("❌ Lambda failed:", str(e))
print(traceback.format_exc())
raise e
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Feedback
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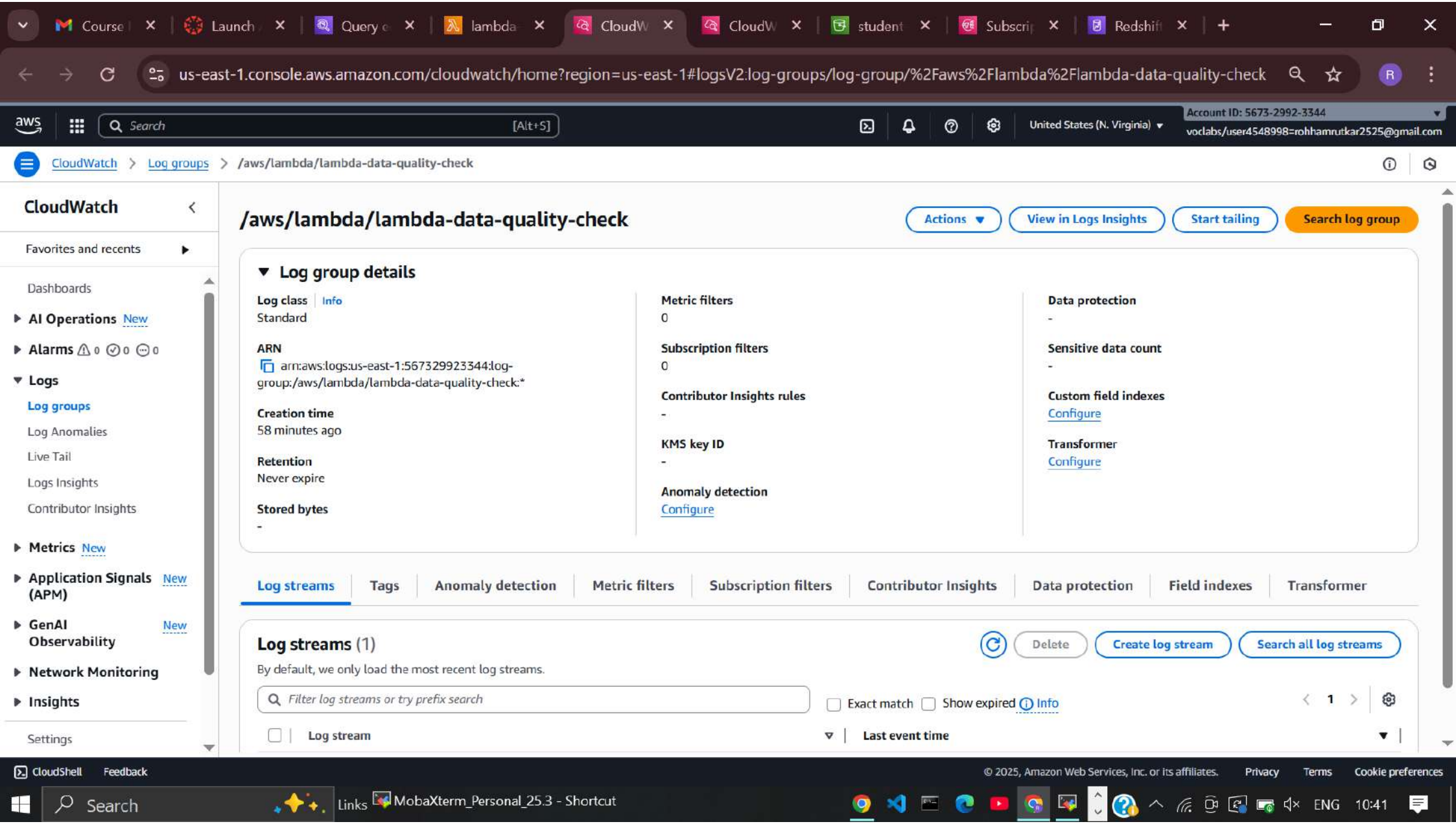
us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#logsV2:log-groups/log-group/%2Faws%2Flambda%2Flambda-data-quality-check
Search [Alt+S]
United States (N. Virginia)
Account ID: 5673-2992-3344
voclabs/user4548998=rohhamrutkar2525@gmail.com
CloudWatch > Log groups > /aws/lambda/lambda-data-quality-check
CloudWatch
Favorites and recents
Dashboards
AI Operations New
Alarms 0 0 0
Logs
Log groups
Log Anomalies
Live Tail
Logs Insights
Contributor Insights
Metrics New
Application Signals (APM) New
GenAI Observability New
Network Monitoring
Insights
Settings
/aws/lambda/lambda-data-quality-check
Actions
View in Logs Insights
Start tailing
Search log group
Log group details
Log class Info
Standard
ARN
arn:aws:logs:us-east-1:567329923344:log-group:/aws/lambda/lambda-data-quality-check:*
Creation time
58 minutes ago
Retention
Never expire
Stored bytes
-
Metric filters
0
Subscription filters
0
Contributor Insights rules
-
KMS key ID
-
Anomaly detection
Configure
Data protection
-
Sensitive data count
-
Custom field indexes
Configure
Transformer
Configure
Log streams
Tags
Anomaly detection
Metric filters
Subscription filters
Contributor Insights
Data protection
Field indexes
Transformer
Log streams (1)
Delete
Create log stream
Search all log streams
By default, we only load the most recent log streams.
Filter log streams or try prefix search
Exact match
Show expired Info
Log stream
Last event time
CloudShell
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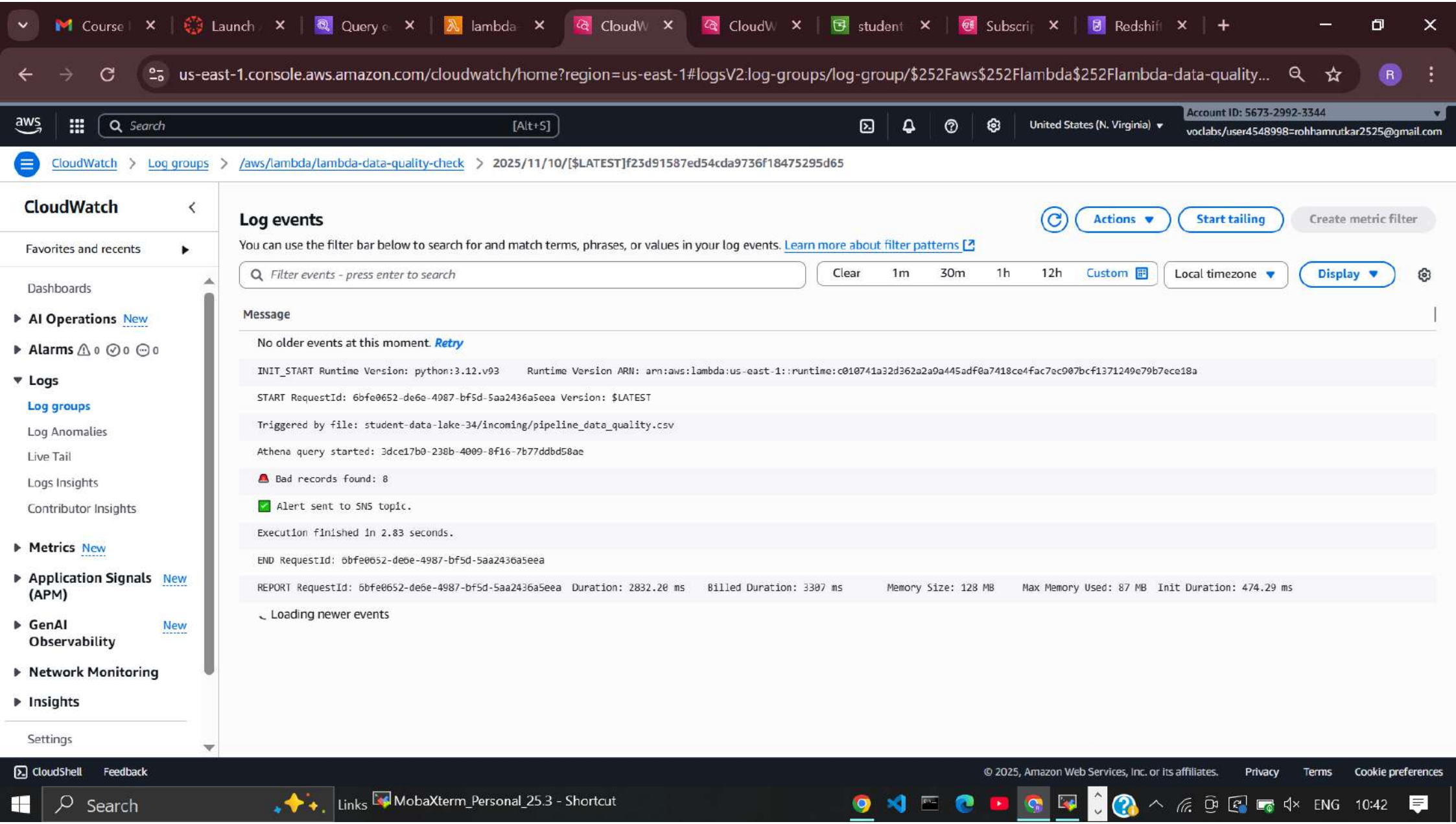
us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#logsV2:log-groups/log-group/$252Faws$252Flambda$252Flambda-data-quality...
Search [Alt+S]
United States (N. Virginia)
Account ID: 5673-2992-3344
voclabs/user4548998=rohhamrutkar2525@gmail.com
CloudWatch > Log groups > /aws/lambda/lambda-data-quality-check > 2025/11/10/[$LATEST]f23d91587ed54cda9736f18475295d65
CloudWatch
Favorites and recents
Dashboards
AI Operations New
Alarms 0 0 0
Logs
Log groups
Log Anomalies
Live Tail
Logs Insights
Contributor Insights
Metrics New
Application Signals (APM) New
GenAI Observability New
Network Monitoring
Insights
Settings
Log events
Actions
Start tailing
Create metric filter
You can use the filter bar below to search for and match terms, phrases, or values in your log events. Learn more about filter patterns
Filter events - press enter to search
Clear 1m 30m 1h 12h Custom
Local timezone
Display
Message
No older events at this moment. Retry
INIT_START Runtime Version: python:3.12.v93 Runtime Version ARN: arn:aws:lambda:us-east-1::runtime:c010741a32d362a2a9a445adf0a7418ce4fac7ec907bcf1371249e79b7ece18a
START RequestId: 6bfe0652-de6e-4987-bf5d-5aa2436a5eea Version: $LATEST
Triggered by file: student-data-lake-34/incoming/pipeline_data_quality.csv
Athena query started: 3dce17b0-238b-4009-8f16-7b77ddbd58ae
Bad records found: 8
Alert sent to SNS topic.
Execution finished in 2.83 seconds.
END RequestId: 6bfe0652-de6e-4987-bf5d-5aa2436a5eea
REPORT RequestId: 6bfe0652-de6e-4987-bf5d-5aa2436a5eea Duration: 2832.20 ms Billed Duration: 3307 ms Memory Size: 128 MB Max Memory Used: 87 MB Init Duration: 474.29 ms
Loading newer events
CloudShell
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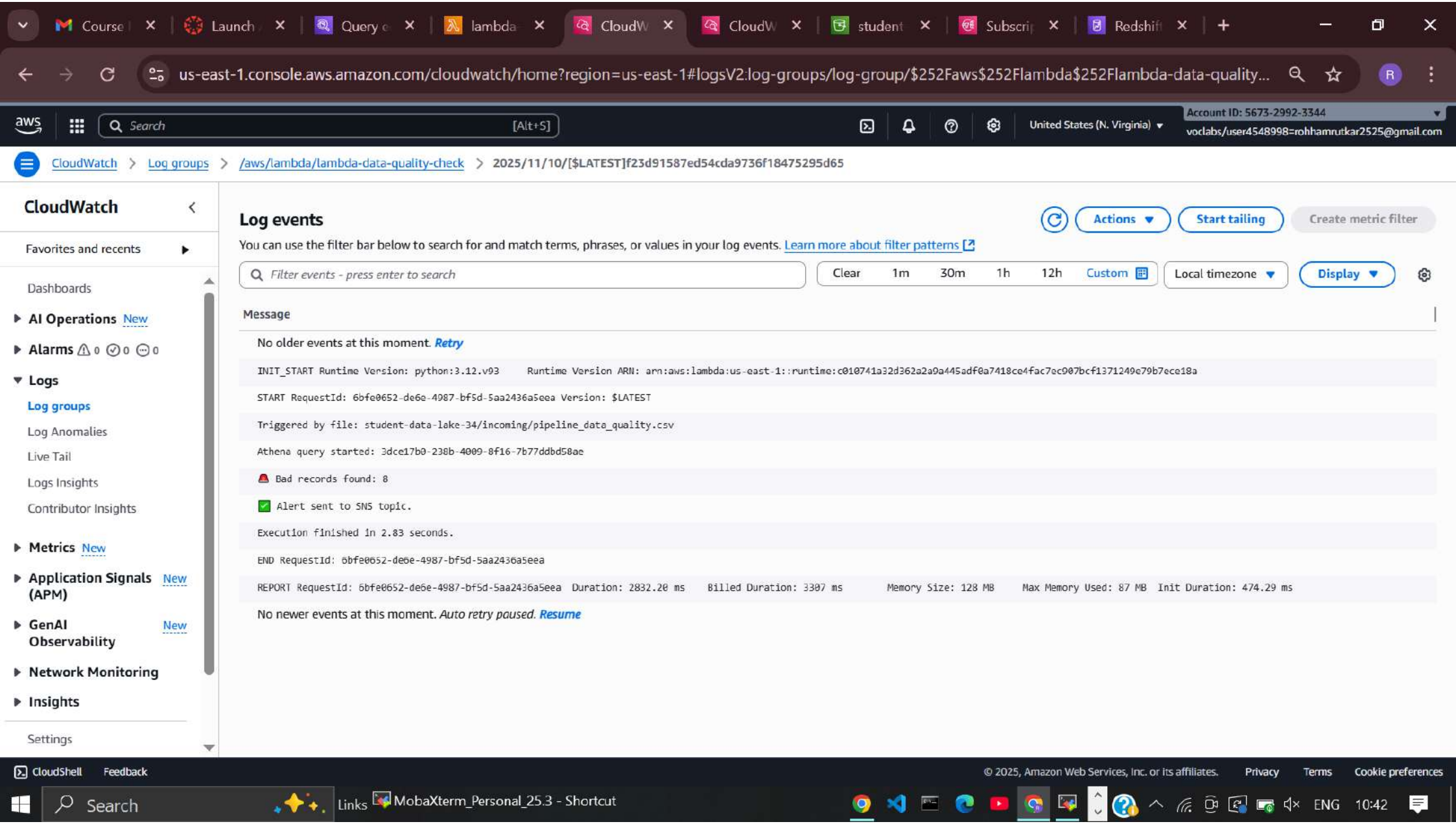
us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#logsV2:log-groups/log-group/$252Faws$252Flambda$252Flambda-data-quality...
Search [Alt+S]
United States (N. Virginia)
Account ID: 5673-2992-3344
voclabs/user4548998=rohhamrutkar2525@gmail.com
CloudWatch > Log groups > /aws/lambda/lambda-data-quality-check > 2025/11/10/[$LATEST]f23d91587ed54cda9736f18475295d65
CloudWatch
Favorites and recents
Dashboards
AI Operations New
Alarms 0 0 0
Logs
Log groups
Log Anomalies
Live Tail
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Filter events - press enter to search
Clear 1m 30m 1h 12h Custom
Local timezone
Display
Message
No older events at this moment. Retry
INIT_START Runtime Version: python:3.12.v93 Runtime Version ARN: arn:aws:lambda:us-east-1::runtime:c010741a32d362a2a9a445adf0a7418ce4fac7ec907bcf1371249e79b7ece18a
START RequestId: 6bfe0652-de6e-4987-bf5d-5aa2436a5eea Version: $LATEST
Triggered by file: student-data-lake-34/incoming/pipeline_data_quality.csv
Athena query started: 3dce17b0-238b-4009-8f16-7b77ddbd58ae
Bad records found: 8
Alert sent to SNS topic.
Execution finished in 2.83 seconds.
END RequestId: 6bfe0652-de6e-4987-bf5d-5aa2436a5eea
REPORT RequestId: 6bfe0652-de6e-4987-bf5d-5aa2436a5eea Duration: 2832.20 ms Billed Duration: 3307 ms Memory Size: 128 MB Max Memory Used: 87 MB Init Duration: 474.29 ms
No newer events at this moment. Auto retry paused. Resume
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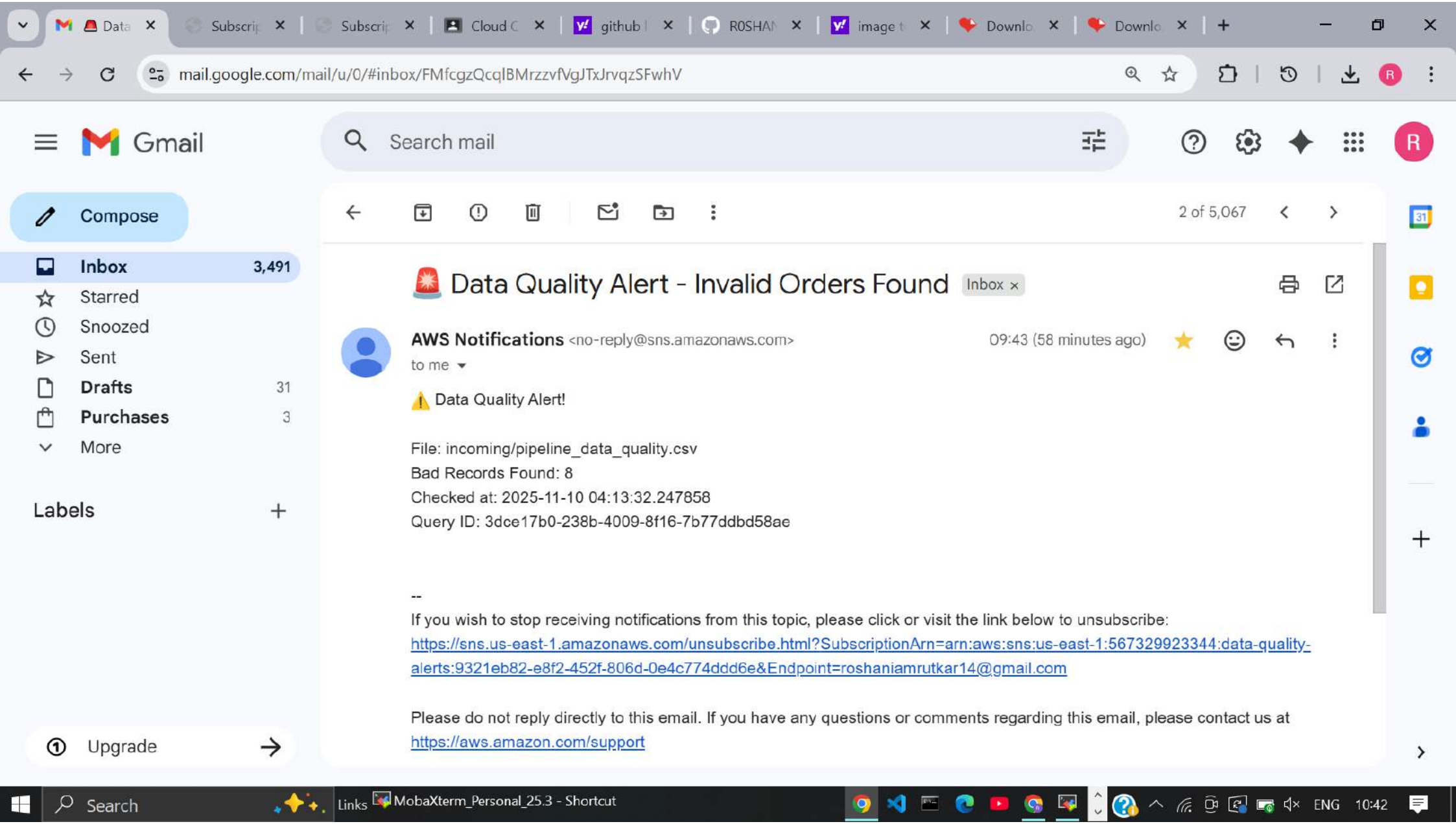
mail.google.com/mail/u/0/#inbox/FMfcgzQcqlBMrzzvfVgJTxJrvqzSFwhV
Gmail
Search mail
Compose
Inbox 3,491
Starred
Snoozed
Sent
Drafts 31
Purchases 3
More
Labels
Upgrade
2 of 5,067
Data Quality Alert - Invalid Orders Found
Inbox ×
AWS Notifications <no-reply@sns.amazonaws.com>
09:43 (58 minutes ago)
to me
⚠️ Data Quality Alert!
File: incoming/pipeline_data_quality.csv
Bad Records Found: 8
Checked at: 2025-11-10 04:13:32.247858
Query ID: 3dce17b0-238b-4009-8f16-7b77ddbd58ae
--
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https://sns.us-east-1.amazonaws.com/unsubscribe.html?SubscriptionArn=arn:aws:sns:us-east-1:567329923344:data-quality-alerts:9321eb82-e8f2-452f-806d-0e4c774ddd6e&Endpoint=roshaniamrutkar14@gmail.com
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