

Mini 2 Lab 4 Report

Link to github: [Github](#)

Preparation and Setup

Tables (1) Info

Find tables

Any tag key

Any tag value

< 1 >

Name

Status

Partition key

Sort key

Indexes

Replication Regions

Deletion protection

Favorite

Read capacity mode

[irisExtended](#)

Active

partition_key (S)

sort_key (S)

0

0

Off

On-demand

Boto3

```
(eleanorvenry) PS C:\Users\STUDENT\Documents\CMU\Spring 2025\AI Systems Design\Assignments\mini 2\Lab4\Lab4> python b11.py
{"AccountMaxReadCapacityUnits": 80000, "AccountMaxWriteCapacityUnits": 80000, "TableMaxReadCapacityUnits": 40000, "TableMaxWriteCapacityUnits": 40000, "ResponseMetadata": {"RequestId": "EBPUAGG0JUNFN505C58EUI2S97VW4KQNS05AEMVJF66Q9ASUAAJG", "HTTPStatusCode": 200, "HTTPHeaders": {"server": "Server", "date": "Thu, 01 May 2025 09:17:41 GMT", "content-type": "application/x-amz-json-1.0", "content-length": "143", "connection": "keep-alive", "x-amzn-requestid": "EBPUAGG0JUNFN505C58EUI2S97VW4KQNS05AEMVJF66Q9ASUAAJG", "x-amz-crc32": "3862975651"}, "RetryAttempts": 0}}
```

Creating a second table

Tables (2) Info

Find tables

Any tag key

Any tag value

< 1 >

Name

Status

Partition key

Sort key

Indexes

Replication Regions

Deletion protection

Favorite

Rea

[IrisExtended](#)

Active

partition_key (S)

sort_key (S)

0

0

Off

On-

[IrisExtendedRetrain](#)

Active

partition_key (S)

sort_key (S)

0

0

Off

On-

Creating Roles

Roles (3) Info

Search

< 1 >

Role name

Trusted entities

Last activity

[AWSServiceRoleForSupport](#)

AWS Service: support (Service-Linker

-

[AWSServiceRoleForTrustedAdvisor](#)

AWS Service: trustedadvisor (Service

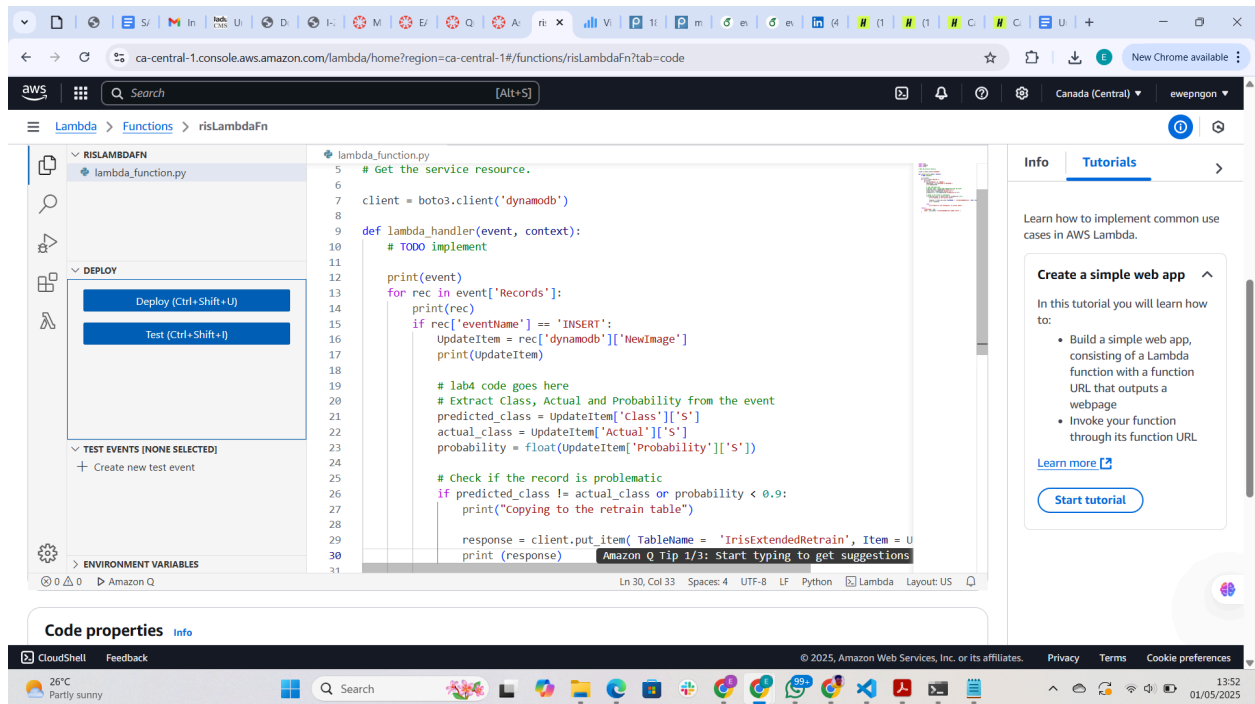
-

[IrisLambdaRole](#)

AWS Service: lambda

-

Create Trigger
Trigger function



Trigger created

▼ Trigger (1)

Use triggers to invoke an AWS Lambda function every time an item is changed, and then your DynamoDB stream is updated.

Trigger (1) ⌂ Configure Delete Create trigger

< 1 > ⚙️

Function	State	Last processing result
risLambdaFn	Enabled	No records processed

Complete Back-end Deployment Test

✔️ Completed · Items returned: 1 · Items scanned: 1 · Efficiency: 100% · RCUs consumed: 2

Table: IrisExtended - Items returned (1) ⌂ Actions Create item

Scan started on May 01, 2025, 13:47:44

< 1 > ⚙️

	partition_key (String)	sort_key (String)	Actual	Class	Features	Probability
<input type="checkbox"/>	test1	manual-insert	versicolor	setosa	{petal_leng...	0.8

Iris Extended Retrained


```

print(event)
for rec in event['Records']:
    print(rec)
    if rec['eventName'] == 'INSERT':
        UpdateItem = rec['dynamodb']['NewImage']
        print(UpdateItem)

        # lab4 code goes here
        # Extract Class, Actual and Probability from the event
        predicted_class = UpdateItem['Class']['S']
        actual_class = UpdateItem['Actual']['S']
        probability = float(UpdateItem['Probability']['S'])

        # Check if the record is problematic
        if predicted_class != actual_class or probability < 0.9:
            print("Copying to the retrain table")

            response = client.put_item( TableName = 'IrisExtendedRetrain',
Item = UpdateItem )
            print (response)

        else:
            print("Record is not problematic, no action taken")

    return {
        'statusCode': 200,
        'body': json.dumps( 'IrisExtendedRetrain Lambda return' )
    }

```

Updated [Test.py](#) function(Full code uploaded to github)

	partition_key (String)	sort_key (String)	Actual	Class	Features	Probability
<input type="checkbox"/>	19:20:52.256	abc	2	2	277.7,0,0,6...	0,8,0,1,0,1
<input type="checkbox"/>	19:28:33.422	abc	2	2	87.3,1,0,6.1...	0,8,0,1,0,1
<input type="checkbox"/>	19:27:32.815	abc	2	2	115.6,1,0,7...	2.02468e-22,2.3285911e-05,0.99997675
<input type="checkbox"/>	19:24:44.091	abc	0	0	292.0,1,0,4...	0.9999999,1.7365116e-07,6.8937045e-34
<input type="checkbox"/>	10:20:12.525	abc	1	1	285.9,2,0,6...	1.0459709e-13,0.9740105,0.025989467
<input type="checkbox"/>	19:28:52.919	abc	2	2	61.0,2,0,6.4...	2.376548e-14,0.0027674313,0.9972526
<input type="checkbox"/>	19:18:43.469	abc	0	0	194.3,1,0,4...	1.0,3.858116e-09,1.9449955e-35
<input type="checkbox"/>	19:24:09.394	abc	0	0	63.0,0,0,5.7...	0.9999957,4.247807e-06,1.8797213e-20
<input type="checkbox"/>	19:25:03.842	abc	0	0	228.5,1,0,4...	0.9999074,9.259845e-05,2.7298636e-24
<input type="checkbox"/>	19:27:43.051	abc	2	2	242.8,2,0,7...	5.235761e-22,0.0013286215,0.9986714

Table: IrisExtendedRetrain - Items returned (50) Actions Create item

Scan started on April 30, 2025, 21:31:25

<input type="checkbox"/>	partition_key (String)	sort_key (String)	Actual	Class	Features	Probability
<input type="checkbox"/>	19-26-33.422	abc	2	2	87.3,1.0,6.1...	0.8,0.1,0.1
<input type="checkbox"/>	19-25-53.936	abc	1	1	123.7,0.0,5...	0.8,0.1,0.1
<input type="checkbox"/>	19-26-54.312	abc	1	1	234.2,0.0,5...	1.0134102e-13,0.8266032,0.17339684
<input type="checkbox"/>	19-26-05.396	abc	1	1	167.7,1.0,6...	0.8,0.1,0.1
<input type="checkbox"/>	19-25-29.808	abc	0	0	187.9,0.0,4...	0.8,0.1,0.1
<input type="checkbox"/>	19-23-57.418	abc	0	0	125.3,1.0,5...	0.8,0.1,0.1
<input type="checkbox"/>	19-23-40.124	abc	0	0	239.9,1.0,4...	0.8,0.1,0.1
<input type="checkbox"/>	19-25-24.962	abc	1	1	190.5,1.0,6...	0.8,0.1,0.1
<input type="checkbox"/>	19-26-04.777	abc	1	1	50.4,0.0,6.6...	0.8,0.1,0.1
<input type="checkbox"/>	19-25-16.053	abc	1	1	275.4,1.0,6...	0.8,0.1,0.1
<input type="checkbox"/>	19-27-00.000	abc	2	2	101.2,1.0,6...	0.8,0.1,0.1

Cleanup
Lambda function

⌂

Successfully deleted function: risLambdaFn

✕

Functions (0)

Last fetched 4 seconds ago

⌂

Actions

Create function

🔍 Filter by attributes or search by keyword

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⚙️

☐

Function name

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☐

Description

▼

☐

Package type

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☐

Runtime

▼

☐

Last modified

▼

Tables

⌂

The request to delete the "IrisExtended, IrisExtendedRetrain" tables has been submitted successfully.

✕

Tables (0) Info

⌂

Actions

Delete

Create table

🔍 Find tables

Any tag key

Any tag value

< 1 >

⚙️

☐

Name

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Status

▼

☐

Partition key

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Sort key

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Indexes

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☐

Replication Regions

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Deletion protection

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Favorite

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Read capacity mo

▼



You have no tables in this account in this AWS Region.

Create table