

# Task

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## Project Overview

This project demonstrates the integration of **AWS Lambda** with **Amazon S3** to automatically process uploaded files.

A Lambda function is triggered whenever a new file is uploaded to a specific S3 bucket, and the results are logged in **CloudWatch**.

## Steps Performed

### 1. Lambda Function Creation

- Created a new **AWS Lambda** function.
- Configured it to handle events triggered by **Amazon S3**.
- Updated **IAM policies** to grant required permissions for:
  - Reading from S3.
  - Writing logs to CloudWatch.

### 2. S3 Trigger Configuration

- Added the S3 bucket as an **event source** for the Lambda function.
- Set the trigger to activate on **ObjectCreated** events.

### 3. Testing the Setup

- Uploaded an image file to the S3 bucket.
- Lambda function executed automatically.

- Output successfully printed in **CloudWatch Logs**.

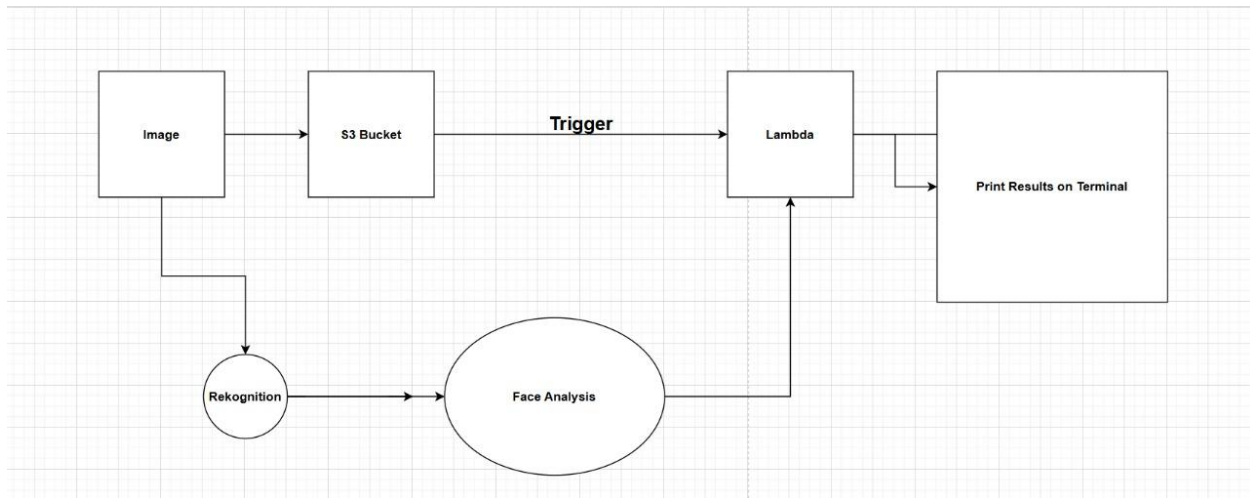
## Results

- Lambda was triggered automatically upon file upload.
- Log outputs were visible in the **CloudWatch Console**.
- Demonstrated event-driven automation between **S3** and **Lambda**.

## Technologies Used

- **AWS Lambda**
- **Amazon S3**
- **AWS IAM**
- **Amazon CloudWatch**

## Architecture:



### 1. Created a lambda function and added s3 bucket as a trigger and update necessary IAM policy

The screenshot shows the AWS Lambda console for the function 'myFaceAnalysisFunction'. The 'Function overview' tab is active, displaying the function's configuration. The trigger is set to 'S3'. The code source is a Python file named 'lambda\_function.py'. The function's description, last modified time, and function ARN are also visible.

**Function overview**

- Diagram** | **Template**
- myFaceAnalysisFunction**
- Layers** (0)
- S3**
- + Add trigger**
- + Add destination**

**Description**

- Last modified** 35 minutes ago
- Function ARN** arn:aws:lambda:us-east-1:042196391152:function:myFaceAnalysisFunction
- Function URL** [Info](#)

**Code source**

- Open in Visual Studio Code** | **Upload from**
- lambda\_function.py**
- 1** `import json`
- 2** `import boto3`

us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/roles/details/myFaceAnalysisFunction-role-0arfbz6?section=permissions

Identity and Access Management (IAM)

Policy s3rekog-policy created.

Summary

Creation date: July 20, 2025, 21:33 (UTC+05:30)

ARN: arn:aws:iam:042196391152:role/service-role/myFaceAnalysisFunction-role-0arfbz6

Maximum session duration: 1 hour

Permissions policies (4)

Policy name	Type	Attached entities
AmazonRekognitionFullAccess	AWS managed	1
AmazonS3FullAccess	AWS managed	1
AWSLambdaBasicExecutionRole-d8d7915b-bbae-4c...	Customer managed	1
s3rekog-policy	Customer inline	0

2.Uploaded image in the bucket, lambda function is triggered and output is printed in the CloudWatch console logs

us-east-1.console.aws.amazon.com/s3/buckets/mybuckettttt4227?region=us-east-1&bucketType=general&tab=objects

Upload succeeded

mybuckettttt4227

Objects (1)

Name	Type	Last modified	Size	Storage class
GollapalliNagaRamaLakshmiJayanthi.png	png	July 20, 2025, 21:43:53 (UTC+05:30)	555.7 KB	Standard

CloudWatch

Log groups

aws/lambda/myFaceAnalysisFunction

2025/07/20/[LATEST]JeffSeebbd7654b5cae224e53c5921a4e

CloudShell

Feedback

Log events

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

UTC timezone

Display

Timestamp	Message
2025-07-20T16:13:52.695Z	Processing uploaded image: s3://mybuckettttt4227/gollapa111nagatamaakshmiJayanthi.png
2025-07-20T16:13:53.198Z	Face 1:
2025-07-20T16:13:53.198Z	Gender: Female (99.99%)
2025-07-20T16:13:53.198Z	Age Range: 13 - 21
2025-07-20T16:13:53.198Z	Emotions:
2025-07-20T16:13:53.198Z	- CALM (99.72%)
2025-07-20T16:13:53.198Z	- CONFUSED (0.00%)
2025-07-20T16:13:53.198Z	- ANGRY (0.03%)
2025-07-20T16:13:53.198Z	- SURPRISED (0.02%)
2025-07-20T16:13:53.198Z	- DISGUSTED (0.02%)
2025-07-20T16:13:53.198Z	- HAPPY (0.01%)
2025-07-20T16:13:53.215Z	- SAD (0.01%)
2025-07-20T16:13:53.215Z	- FEAR (0.00%)
2025-07-20T16:13:53.215Z	Smile: False (99.12%)
2025-07-20T16:13:53.217Z	END RequestId: a9636343-4383-498a-a884-fe668bd084ab
2025-07-20T16:13:53.217Z	REPORT RequestId: a9636343-4383-498a-a884-fe668bd084ab Duration: 531.77 ms Billed Duration: 532 ms Memory Size: 128 MB Max Memory Used: 86 MB

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CloudWatch

Feedback

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20-07-2025