AWS Facial Rekognition Project

Overview:-

This project demonstrates the use of AWS services to perform facial an image stored in an S3 bucket. It involves configuring AWS Lambda to integrate with Amazon Rekognition and Amazon S3, enabling the detection of facial attributes from an image file.

Architecture

1. **S3 Bucket**: Stores the input image (e.g., `Virat.jpg`).
2. **AWS Lambda**: Processes the image using Rekognition and returns detected facial details.
3. **Amazon Rekognition**: Performs the facial recognition on the provided image.

Steps Implemented
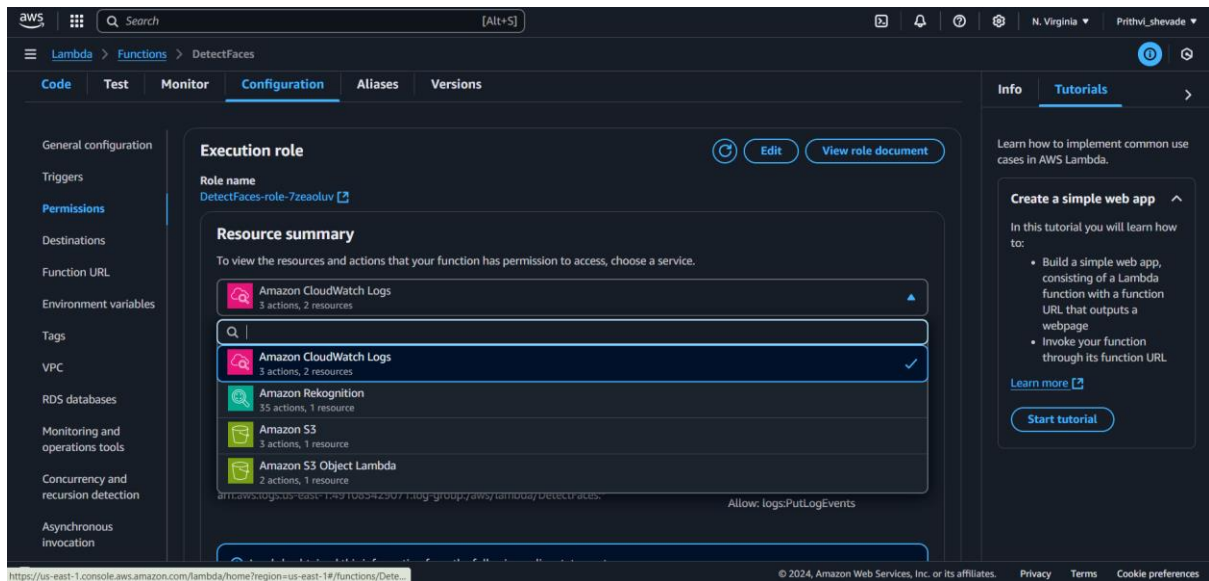
1. Creating an S3 Bucket

- Created an S3 bucket named `aws-facial-rekognition`.
- Uploaded an image file (`Virat.jpg`) to the bucket for processing.
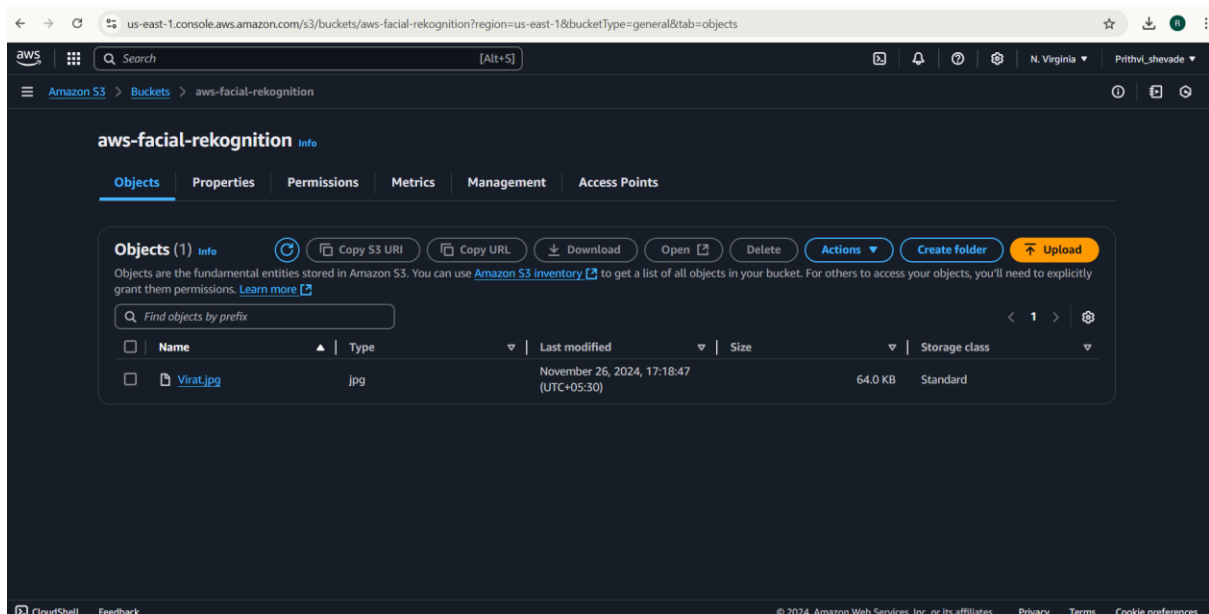
2. Configuring the Lambda Function

- Created a Lambda function named `DetectFaces`.
- Added the following AWS Managed Policies to the Lambda execution role:
  - **Amazon S3 Read-Only Access**
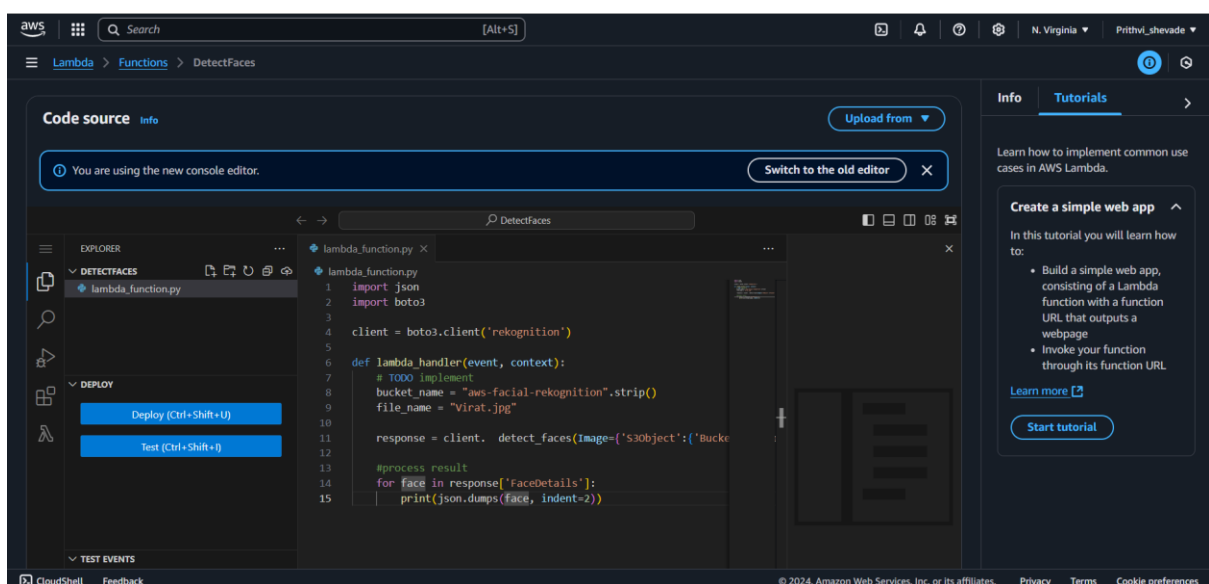 - **Amazon Rekognition Read-Only Access**
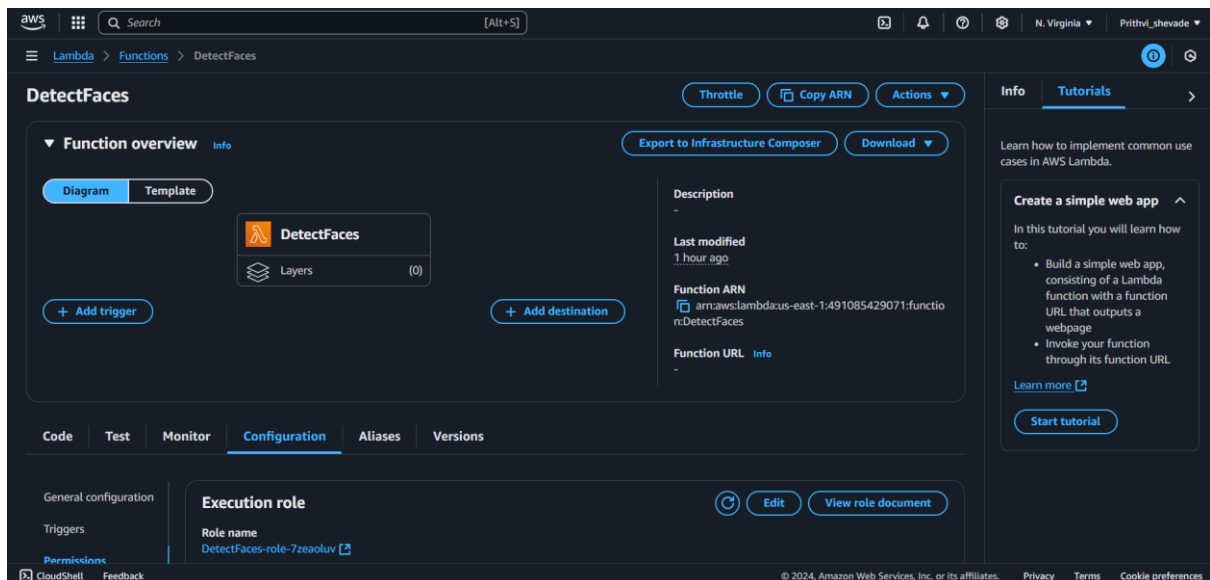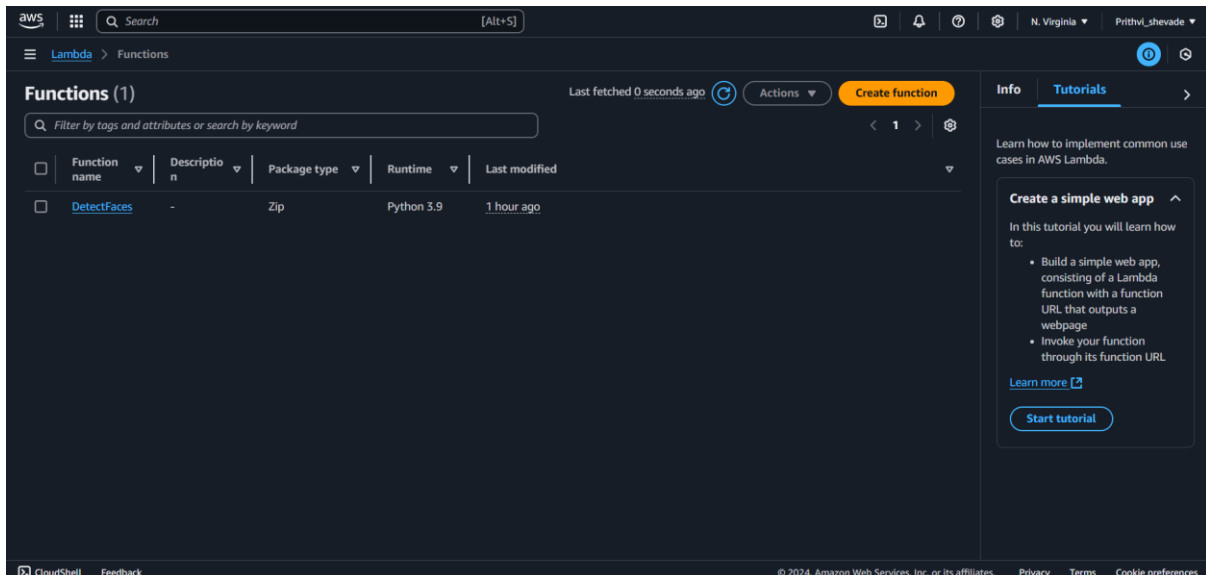
3. Writing the Lambda Code

Updated the Lambda function code to:

- Import the `boto3` library for AWS SDK functionality.
- Reference the S3 bucket and file name.
- Use Rekognition's `detect_faces` API to analyze the image.
- Print the results in JSON format, focusing on attributes like the **Age Range** of detected faces.

4. Testing the Lambda Function

- Configured a test event in the Lambda console.
- Deployed the function and executed the test.
- Verified the results, including detected facial attributes such as age ranges.
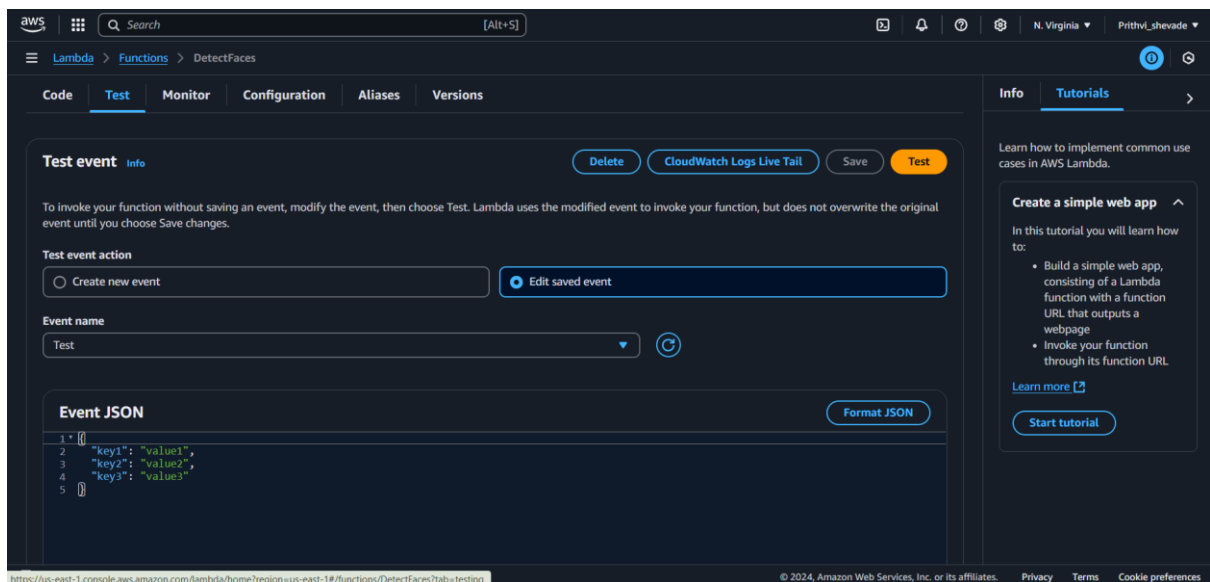
Results

- Successfully detected facial attributes from the `Virat.jpg` image.
- Retrieved JSON output containing details such as **Age Range**, **Emotions**, and other facial attributes.