

# **FACE DETECTION USING AWS**

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**Mtech in Software Engineering(Intgd)**

**16MIS0047**

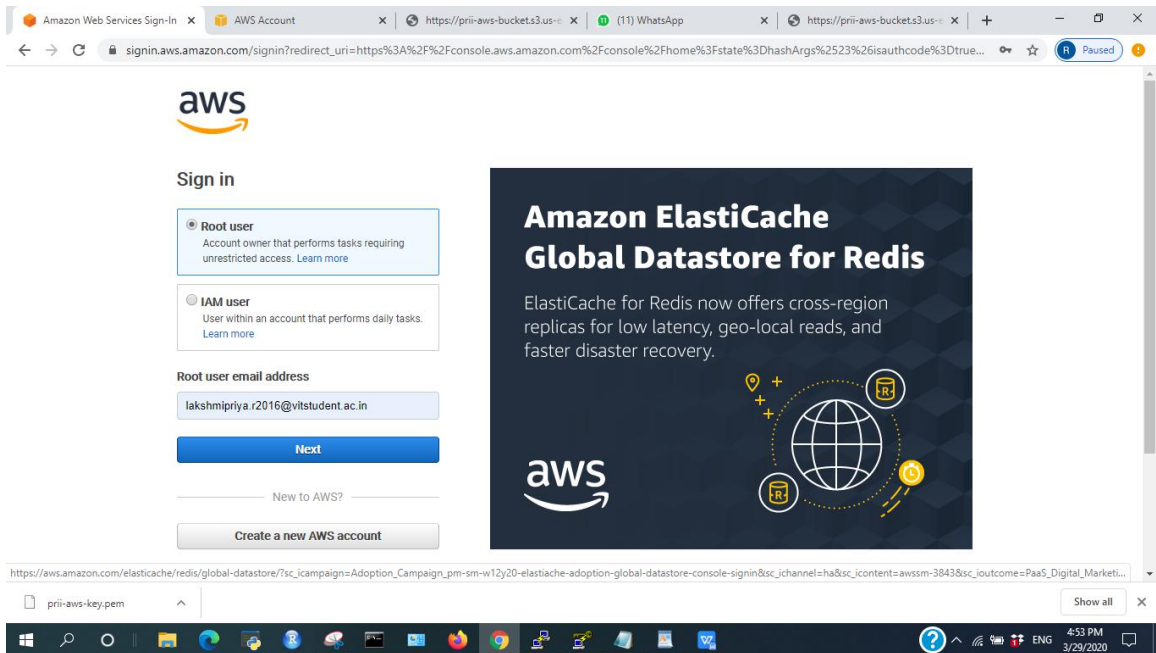
# **FACE DETECTION USING AWS**

**Lakshmi Priya R**

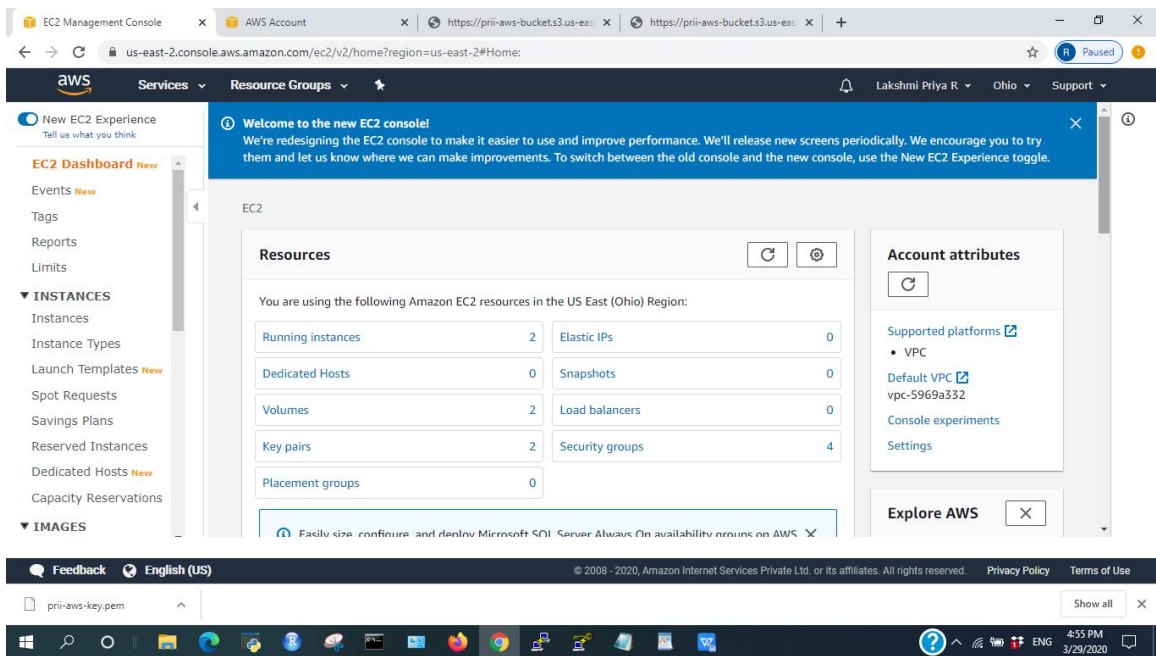
**VIT University-Vellore**

**AWS:**

**A. AWS LOGIN SCREEN WITH USER NAME**



## B. EC2 DASHBOARD



## C. S3 DASHBOARD

S3 Management Console | AWS Account | https://prii-aws-buckets3.us-east-2/ | https://prii-aws-buckets3.us-east-2/ | +

s3.console.aws.amazon.com/s3/home?region=us-east-2#

Amazon S3

We're gradually updating the design of the Amazon S3 console. You will notice some updated screens as we improve the performance and user interface. To help us improve the experience, [give feedback](#) on the recent updates.

Amazon S3

Buckets (3) [Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

Find bucket by name

	Name	Region	Access	Bucket created
<input type="radio"/>	pri-aws-bucket	US East (Ohio) us-east-2	Objects can be public	2020-03-28T08:20:52.000Z
<input type="radio"/>	prii-aws-bucket	US East (Ohio) us-east-2	Objects can be public	2020-03-29T11:02:52.000Z
<input type="radio"/>	priya-aws-bucket	US East (Ohio) us-east-2	Not Public	2020-03-27T06:07:56.000Z

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prii-aws-key.pem | Show all

Windows taskbar: 4:55 PM 3/29/2020

## D. RECOGNITION DASHBOARD

Recognition Console | https://us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#/

Amazon Rekognition

Deep learning-based visual analysis service  
Search, verify, and organize millions of images and videos

[Try Demo](#) [Download SDKs](#)

**Easily Integrate Powerful Visual Analysis into Your App**  
You don't need computer vision or deep learning expertise to take advantage of

**Continuously Learning**  
Amazon Rekognition is designed to use deep learning technology to analyze billions of images and videos daily. It is continuously

**Integrated with AWS Services**  
Amazon Rekognition is designed to work seamlessly with other AWS services. Rekognition integrates directly with Amazon

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Windows taskbar: 11:35 AM 4/3/2020

# EC2:

## A.Choosing an AMI

Attach/Replace IAM Role | EC2 M... | AWS Account | Launch instance wizard | EC2 M... | +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

aws Services Resource Groups Lakshmi Priya R Ohio Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Free tier only

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0e01ce4ee18447327 (64-bit x86) / ami-03201f374ab66a26e (64-bit Arm)

Free tier eligible

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

64-bit (x86)

64-bit (Arm)

Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-01b01bbd08f24c7a8

Free tier eligible

The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

64-bit (x86)

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## B.Choosing an Instance Type

Attach/Replace IAM Role | EC2 M... | AWS Account | Launch instance wizard | EC2 M... | +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

aws Services Resource Groups Lakshmi Priya R Ohio Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

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## C.Adding Storage

Launch instance wizard | EC2 | X

https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

Services Resource Groups

Lakshmi Priya R Ohio Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

### Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-0f54692056aaa4c20	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

Cancel Previous Review and Launch Next: Add Tags

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## D.Configuring Security Group

Launch instance wizard | EC2 | X

https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

Services Resource Groups

Lakshmi Priya R Ohio Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

### Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a new security group ☐ Select an existing security group

Security group name: launch-wizard-4

Description: launch-wizard-4 created 2020-04-03T12:25:58.811+05:30

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

Add Rule

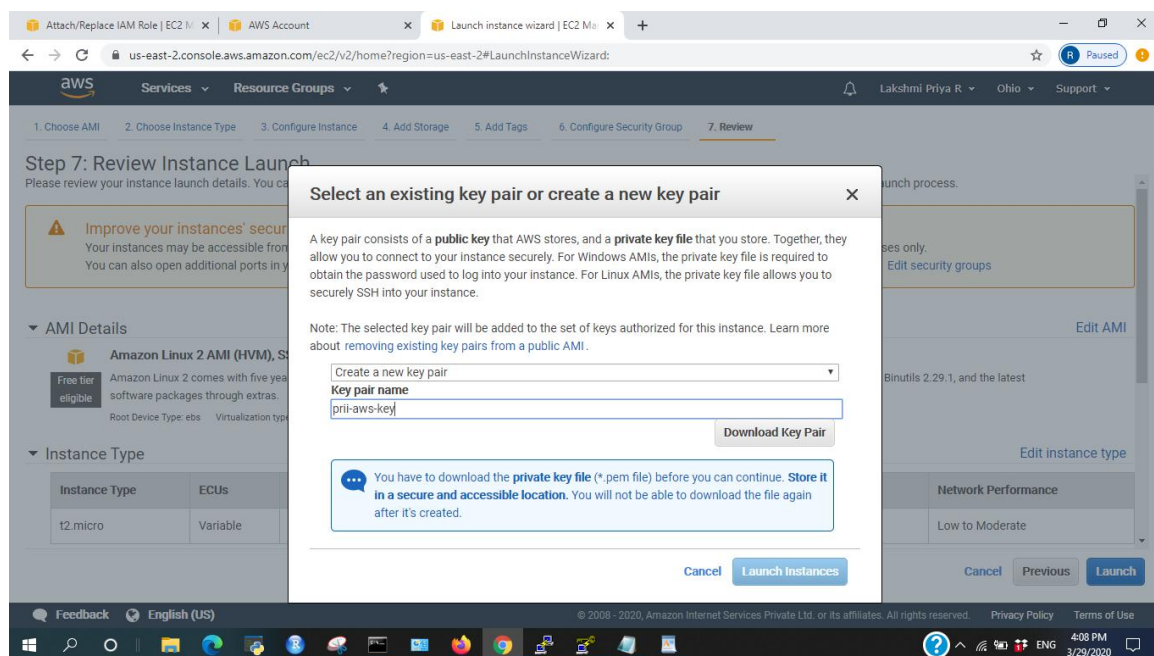
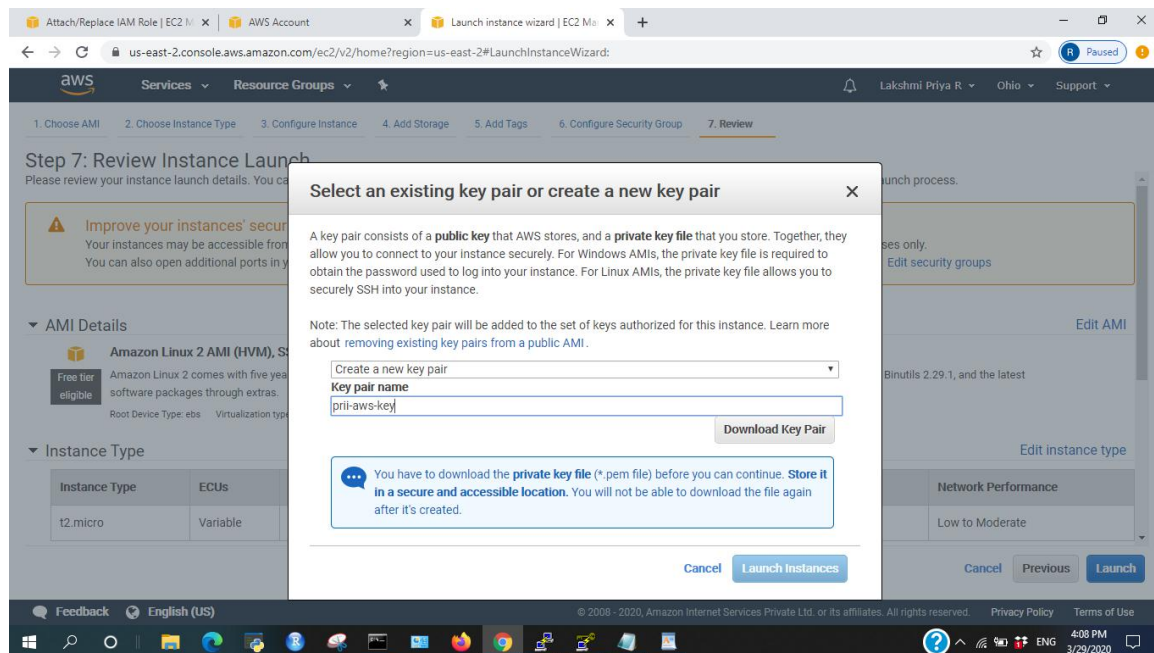
**Warning**  
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous Review and Launch

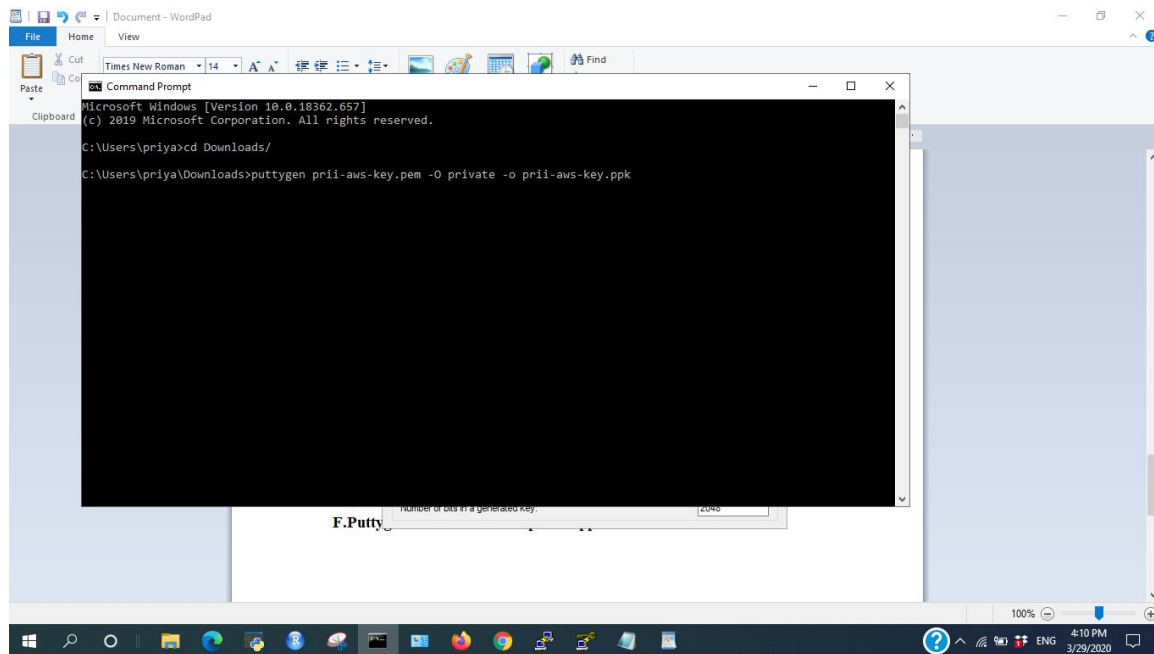
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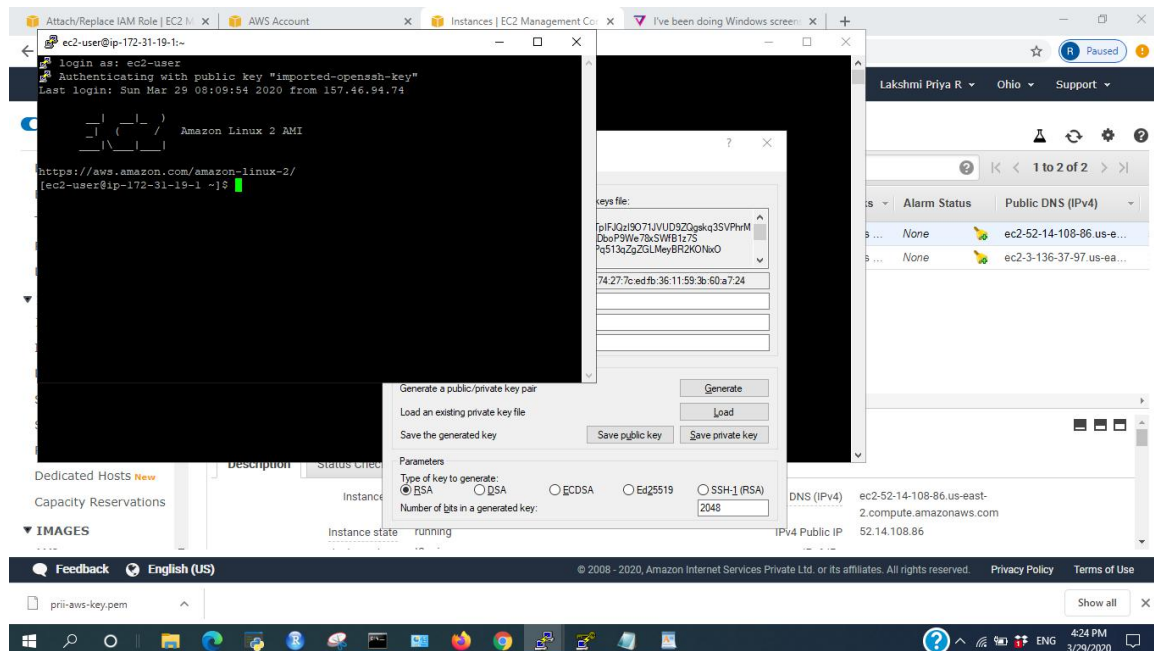
## E.Key Pair Download



## F.Puttygen conversion from pem to ppk

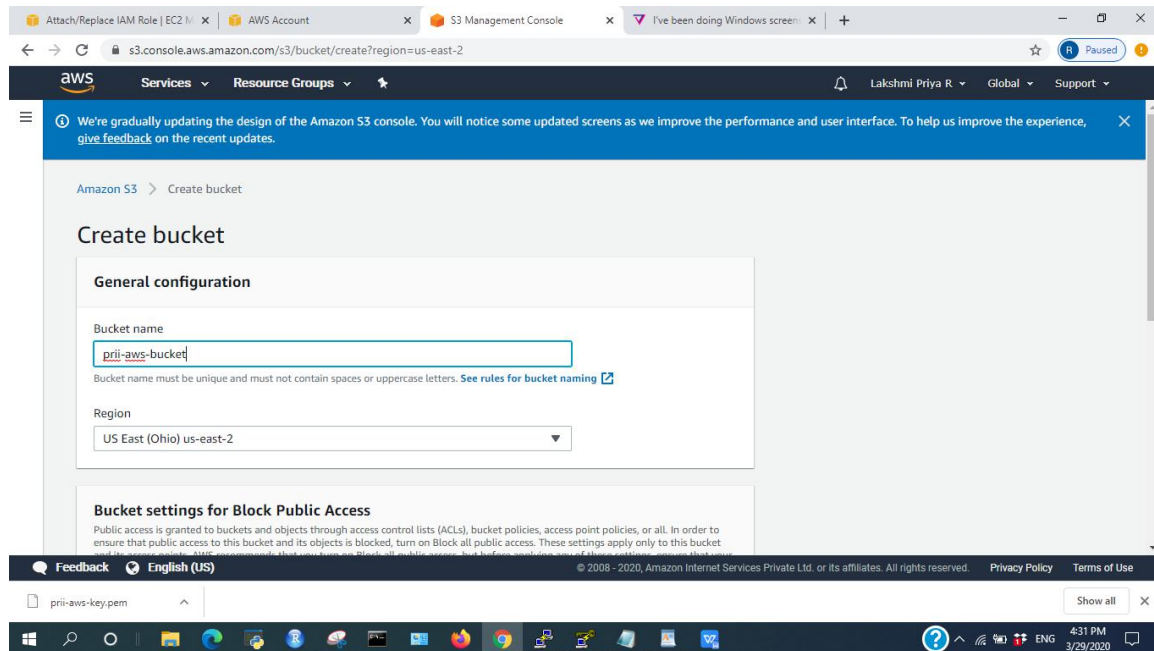


### G. Logged into EC2 Screen

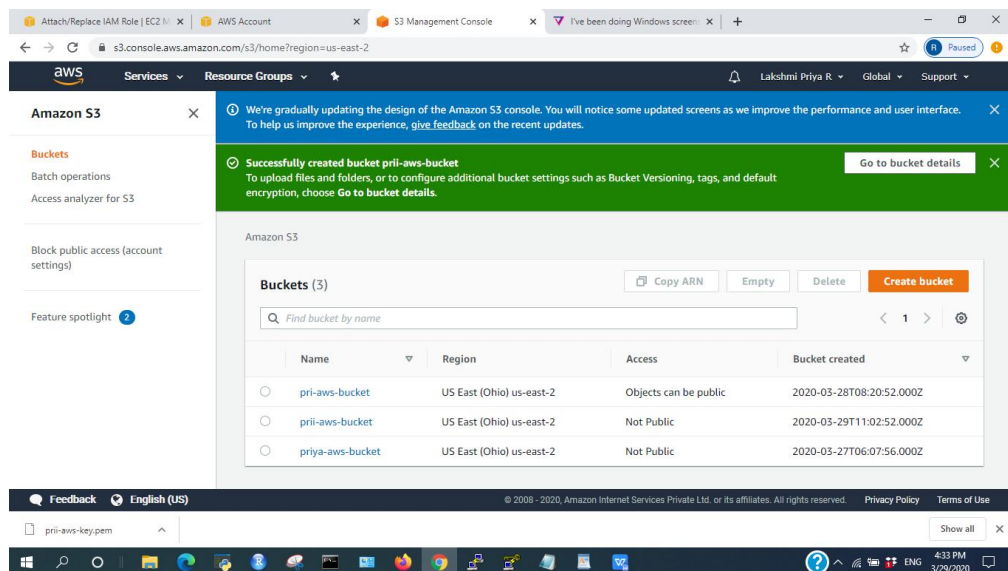


S3:

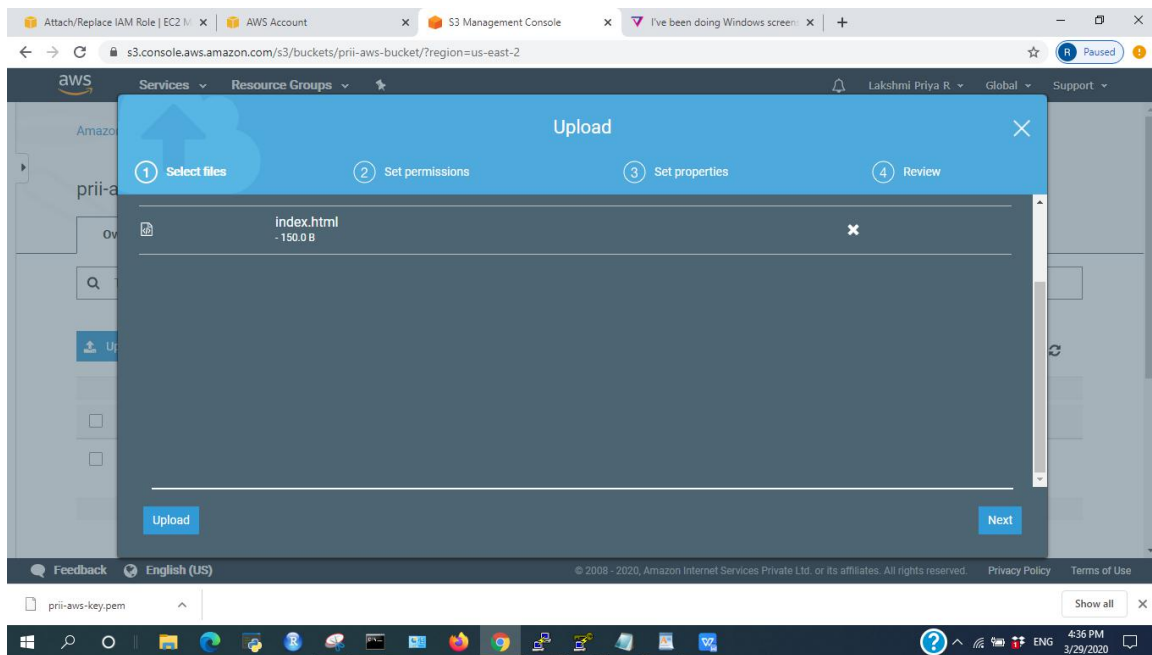
## A. Creating a Bucket



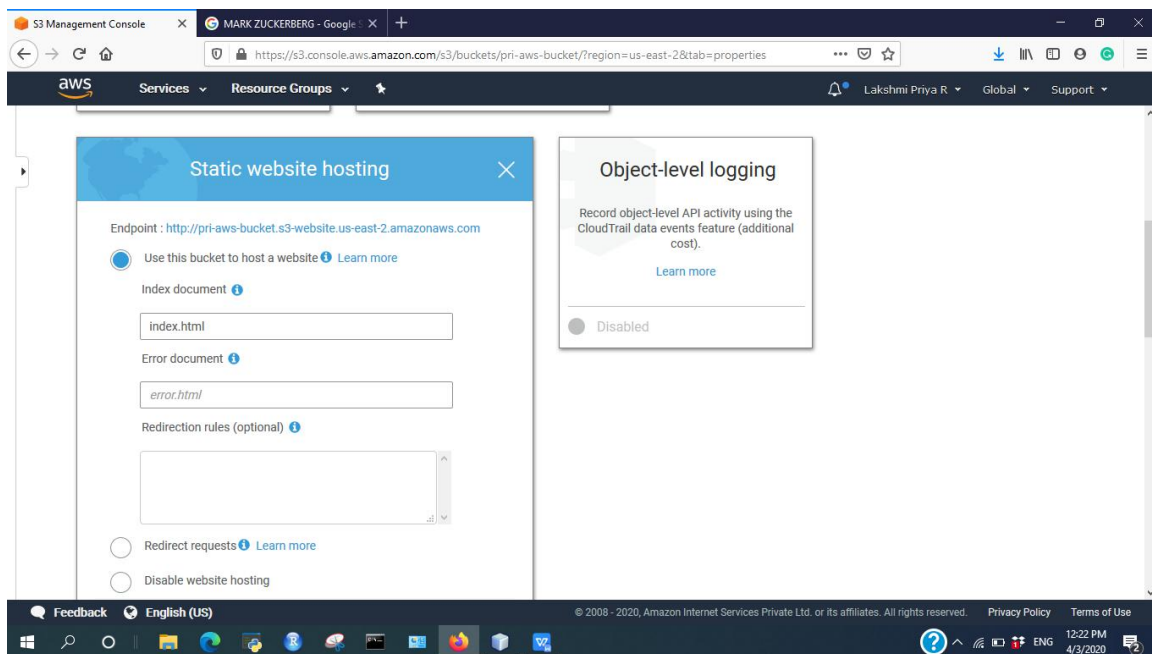
## B. Uploading an object



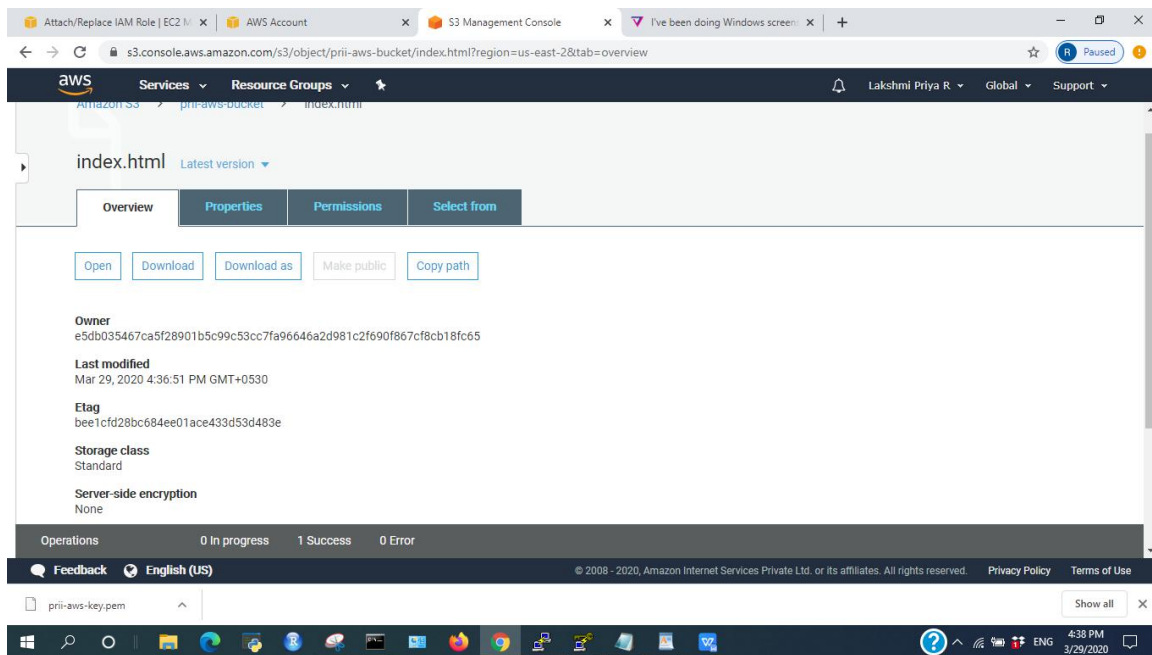




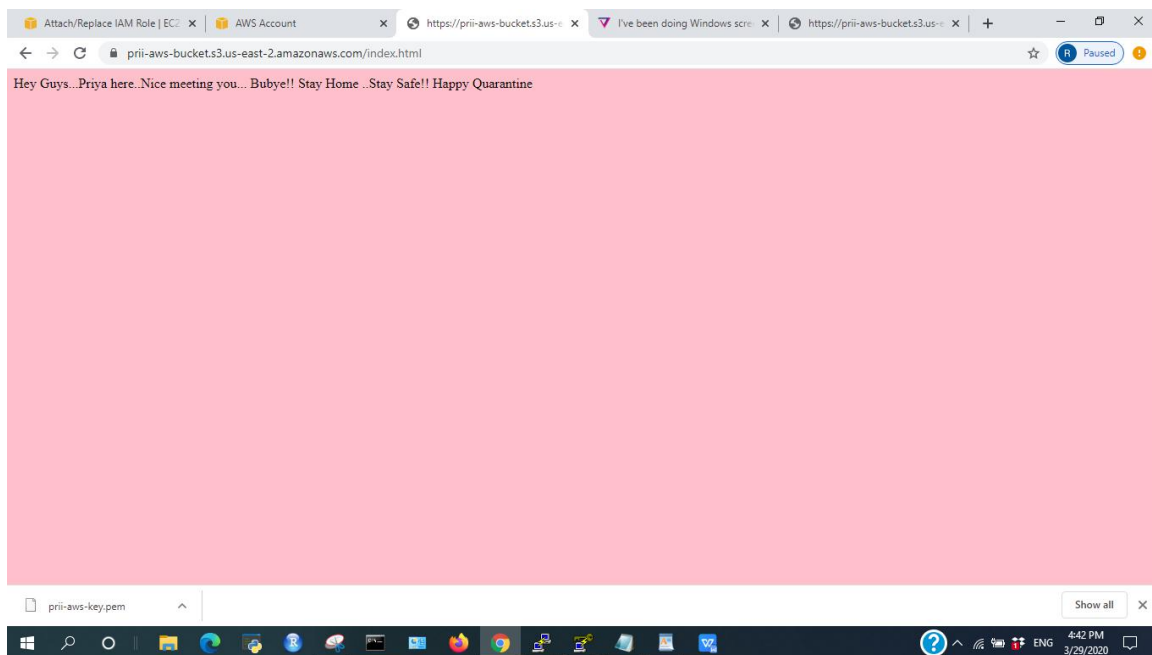
## C. STATIC WEB HOSTING



## D. Making Object Public



## E. Checking S3 link on browser



## EC2 & S3

### A. INSTALLING AWS-SDK

The screenshot shows the AWS Management Console with the EC2 Dashboard selected. A terminal window is open on an EC2 instance, displaying the following commands and output:

```

[ec2-user@ip-172-31-19-1 ~]$ sudo yum install php
Installing : httpd.x86_64 0:2.4.41-1.amzn2.0.1
Complete!
[ec2-user@ip-172-31-19-1 ~]$ curl -sS https://getcomposer.org/installer | php
All settings correct for using Composer
The installation directory "/var/www/html/face" is not writable
[ec2-user@ip-172-31-19-1 ~]$ sudo php -d memory_limit=-1 ~/composer.phar require aws/aws-sdk-php
Using version ^2.8 for aws/aws-sdk-php
./composer.json has been updated
Loading composer repositories with package information
Updating dependencies (including require-dev)
Nothing to install or update
Package guzzle/guzzle is abandoned, you should avoid using it. Use guzzlehttp/guzzle instead.
Generating autoload files
[ec2-user@ip-172-31-19-1 ~]$

```

## B. INSTALLING PHP

The screenshot shows the AWS Management Console with the S3 Buckets page selected. A terminal window is open on an EC2 instance, displaying the following commands and output:

```

[ec2-user@ip-172-31-19-1 ~]$ sudo yum install php
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Package php-7.4.16-46.amzn2.0.2.x86_64 already installed and latest version
Nothing to do
[ec2-user@ip-172-31-19-1 ~]$ curl -sS https://getcomposer.org/installer | php
All settings correct for using Composer
Downloading...
Composer (version 1.10.1) successfully installed to: /home/ec2-user/composer.phar
Use it: php composer.phar
[ec2-user@ip-172-31-19-1 ~]$ cd /var/www/html/face
[ec2-user@ip-172-31-19-1 face]$ sudo php -d memory_limit=-1 ~/composer.phar require aws/aws-sdk-php

```

## C. INDEX.PHP FILE CODE

The screenshot shows the AWS S3 Management Console with a list of buckets in the US East (Ohio) region. A terminal window is open, displaying the following commands and output:

```

<?php
/*
Install php - sudo yum install php
curl -sS https://getcomposer.org/installer | php
cd /var/www/html
sudo mkdir face
cd face
sudo php -d memory_limit=-1 ~/composer.phar require aws/aws-sdk-
php
In case if you get memory error -
sudo /bin/dd if=/dev/zero of=/var/swap.1 bs=1M count=1024
sudo /sbin/mkswap /var/swap.1
sudo /sbin/swapon /var/swap.1
sudo wget
https://i.pinimg.com/originals/b9/7e/a3/b97ea33b5842c7894b804923c
6c05580.jpg
sudo mv b97ea33b5842c7894b804923c6c05580.jpg sample.jpg
*/
error_reporting(0);
require_once( __DIR__ . '/vendor/autoload.php');
  
```

#### D. UPLOAD SUCCESSFUL

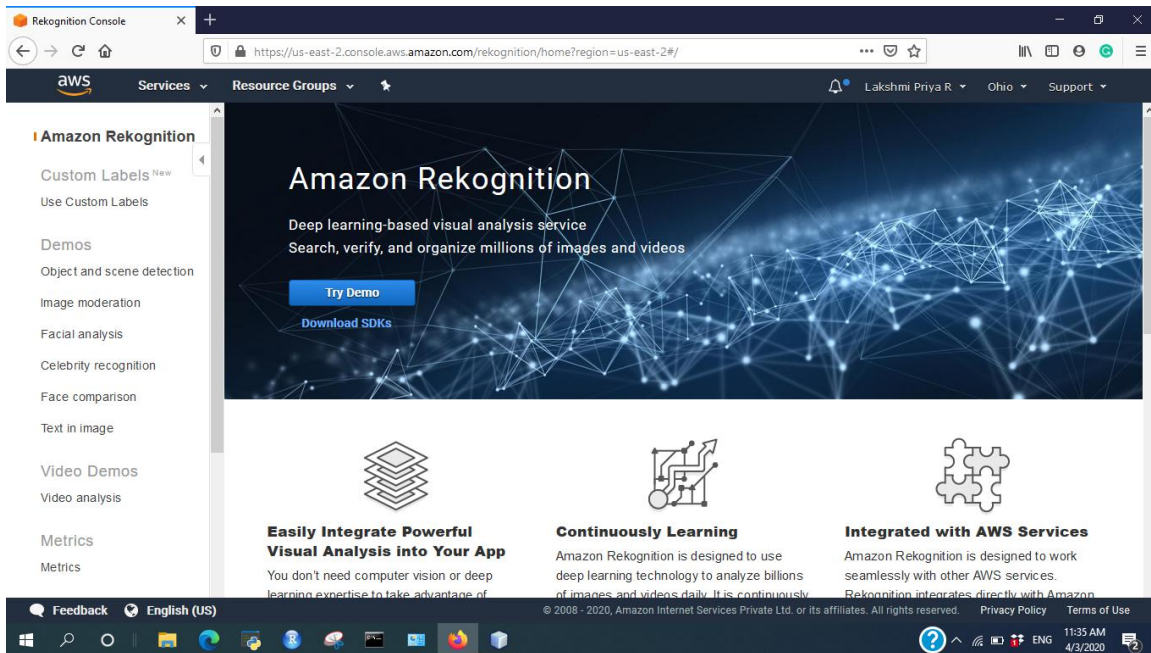
The screenshot shows the AWS S3 Management Console with the 'pri-aws-bucket' selected. A terminal window is open, displaying the following commands and output:

```

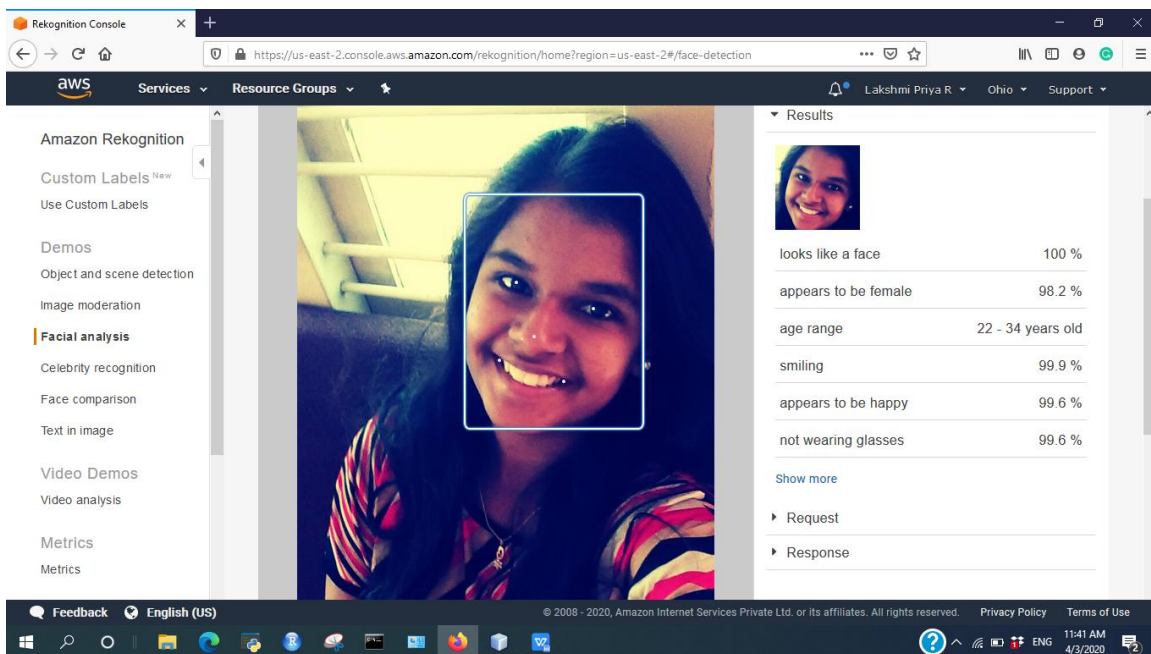
ec2-user@ip-172-31-19-1:/var/www/html/face$
ec2-user@ip-172-31-19-1:/var/www/html/face$ curl -sS https://getcomposer.org/installer | php
ec2-user@ip-172-31-19-1:/var/www/html/face$ cd /var/www/html
ec2-user@ip-172-31-19-1:/var/www/html$ sudo mkdir face
ec2-user@ip-172-31-19-1:/var/www/html$ cd face
ec2-user@ip-172-31-19-1:/var/www/html/face$ sudo php -d memory_limit=-1 ~/composer.phar require aws/aws-sdk-
php
ec2-user@ip-172-31-19-1:/var/www/html/face$
ec2-user@ip-172-31-19-1:/var/www/html/face$ In case if you get memory error -
ec2-user@ip-172-31-19-1:/var/www/html/face$ sudo /bin/dd if=/dev/zero of=/var/swap.1 bs=1M count=1024
ec2-user@ip-172-31-19-1:/var/www/html/face$ sudo /sbin/mkswap /var/swap.1
ec2-user@ip-172-31-19-1:/var/www/html/face$ sudo /sbin/swapon /var/swap.1
ec2-user@ip-172-31-19-1:/var/www/html/face$ sudo wget
ec2-user@ip-172-31-19-1:/var/www/html/face$ https://i.pinimg.com/originals/b9/7e/a3/b97ea33b5842c7894b804923c
ec2-user@ip-172-31-19-1:/var/www/html/face$ 6c05580.jpg
ec2-user@ip-172-31-19-1:/var/www/html/face$ sudo mv b97ea33b5842c7894b804923c6c05580.jpg sample.jpg
ec2-user@ip-172-31-19-1:/var/www/html/face$
ec2-user@ip-172-31-19-1:/var/www/html/face$ */
ec2-user@ip-172-31-19-1:/var/www/html/face$ error_reporting(0);
ec2-user@ip-172-31-19-1:/var/www/html/face$ require_once( __DIR__ . '/vendor/autoload.php');
  
```

The terminal output shows the successful upload of the file 'sample.jpg' to the bucket. The file is listed in the bucket's contents with a size of 128.4 KB.

# Rekognition:



## A. Face Detect





## B. FACE COMPARISON

The screenshot shows the AWS Rekognition Console interface for the Face Comparison demo. The left sidebar lists various services, with 'Face comparison' highlighted. The main content area displays two sample images of a woman, each with a 'Choose a sample image' label below it. Below these are two smaller images labeled 'Use your own image'. On the right, the 'Results' section shows a comparison of the two images with a similarity score of 99.8%. The 'Request' and 'Response' sections are also visible. The bottom of the screen shows the Windows taskbar with various application icons and the system clock indicating 11:44 AM on 4/3/2020.

## C. TEXT RECOGNITION

The screenshot shows the AWS Rekognition Console interface for the Text in Image demo. The left sidebar lists various services, with 'Text in image' highlighted. The main content area displays a large image of a poster with the text 'Respect people who find time for you in their busy schedule, but love people who never look at their schedule when you need them'. On the right, the 'Results' section shows the detected text from the image. The 'Request' and 'Response' sections are also visible. The bottom of the screen shows the Windows taskbar with various application icons and the system clock indicating 12:09 PM on 4/3/2020.

## D. CELEBRITY RECOGNITION

The screenshot shows the AWS Rekognition Console interface for the Celebrity Recognition demo. The browser address bar indicates the URL: <https://us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#/celebrity-detection>. The AWS logo and navigation tabs (Services, Resource Groups) are visible at the top. A left sidebar lists various demos, with 'Celebrity recognition' highlighted. The main content area is titled 'Celebrity recognition' and includes the text: 'Recognition automatically recognizes celebrities in images and provides confidence scores.'

The demo interface features a large image of Rowan Atkinson with a blue bounding box around his face. To the right, a 'Results' section displays a smaller version of the image, the name 'Rowan Atkinson', a 'Learn More' link, and a 'Match confidence' of 95%. Below the main image, there are two options: 'Choose a sample image' (with thumbnails of other celebrities) and 'Use your own image' (with an 'Upload' button and a note: 'Image must be .jpg or .png format and no larger than 5MB. Your image isn't stored.'). A 'Done with the demo?' section with a 'Learn more' link is also present.

The bottom of the screenshot shows the Windows taskbar with various application icons and the system clock indicating 12:13 PM on 4/3/2020.