Techfest
INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY

Techfest IIT Bombay Masterclass

Jeevesh Awal
CTO | PrismCode

PRISMCODE
PRISMCODE INFO SOLUTIONS PVT LTD
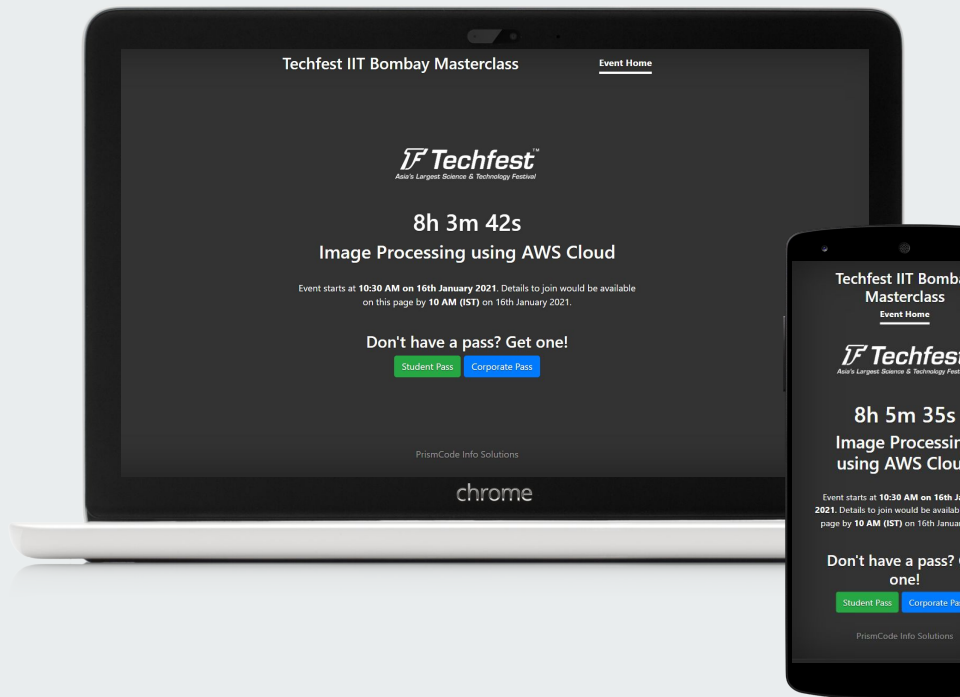
Session Plan

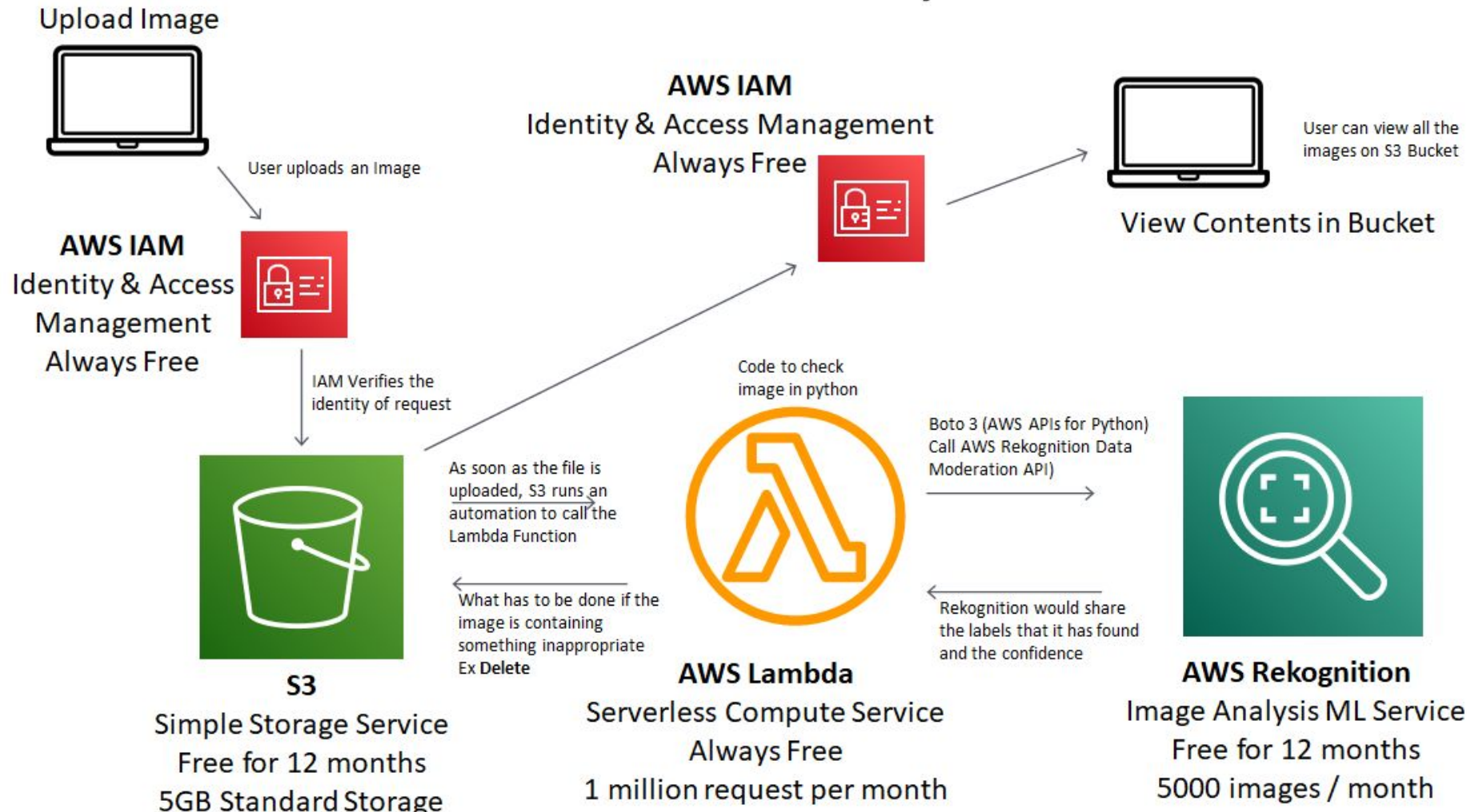|	
Introduction to Cloud	10:30 - 11:45
Exploring AWS Essentials	11:50 - 12:15
Identity & Access Management	12:30 - 01:30
AWS Free Tier & Introduction to HTML	02:15 - 03:15
HTML Forms & File Upload	03:20 - 04:20
Apache Server and HTTP	04:30 - 05:00
Basic File Upload Application using PHP	05:00 - 05:30
Doubt Session	5:30 - 06:00

Introduction to Cloud

Project Overview

Cloud Computing

Why cloud?

IaaS, PaaS, SaaS, FaaS

Why AWS?

Content Filtration System

Upload Image

User uploads an Image

AWS IAM
Identity & Access Management
Always Free

IAM Verifies the identity of request

AWS IAM
Identity & Access Management
Always Free

User can view all the images on S3 Bucket

View Contents in Bucket

As soon as the file is uploaded, S3 runs an automation to call the Lambda Function

What has to be done if the image is containing something inappropriate Ex **Delete**

Code to check image in python

Boto 3 (AWS APIs for Python) Call AWS Rekognition Data Moderation API)

Rekognition would share the labels that it has found and the confidence

S3
Simple Storage Service
Free for 12 months
5GB Standard Storage

AWS Lambda
Serverless Compute Service
Always Free
1 million request per month

AWS Rekognition
Image Analysis ML Service
Free for 12 months
5000 images / month

Cloud Computing

- On-demand delivery of compute power, database storage, applications, and other IT resources through a cloud services platform via the Internet.

- Don't need to make large upfront investments in hardware. Instead, you can provision exactly the right type and size of computing resources you need to power your newest bright idea or operate your IT department.

- Provides a simple way to access servers, storage, databases and a broad set of application services over the Internet.

ON PREMISE
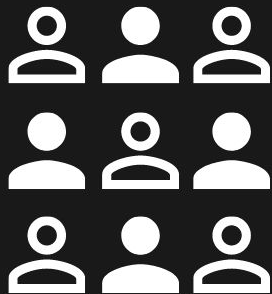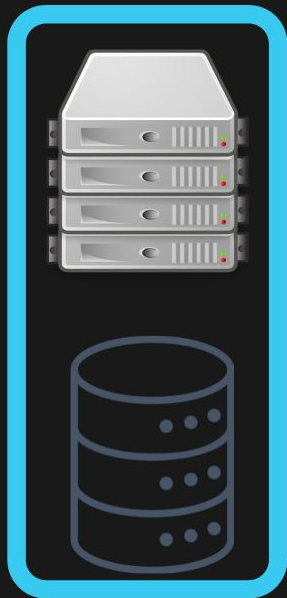
CLOUD
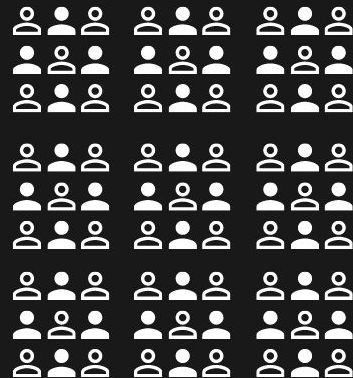
Why Cloud?

Reduced IT Cost

Scalability

Business Continuity

Flexibility of location

Automatic Updates

IaaS

What is Infrastructure as a Service?

>> The most basic category of cloud computing services.

>> With IaaS, you rent IT infrastructure including servers, virtual machines, storage, networks, operating systems from a cloud service provider on a pay-as-you-go basis.

>> For Example:
> > AWS EC2
> > Google Compute Engine
> > Azure Virtual Machines
> > OCI Bare Metal Machine

PaaS

What is Platform as a Service?

>> PaaS allows you to avoid the expense and complexity of buying and managing software licenses, the underlying application infrastructure, middleware or the development tools and other resources.

>> You manage the applications and services you develop and the cloud service provider typically manages everything else.

>> For Example:
  > AWS Elastic Beanstalk
  > Azure Web Apps
  > Google App Engine

FaaS

What is Function as a Service?

>> Function as a service is a category of cloud computing services that provides a platform allowing customers to develop, run, and manage application functionalities without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app.

>> For Example:
> AWS Lambda
> Azure Functions
> Google Cloud Functions

SaaS

What is Software as a Service?

>> Software as a service is a method for delivering software applications over the Internet. With SaaS, cloud providers host and manage the software application and underlying infrastructure and handle any maintenance, like software upgrades and security patching. Users connect to the application over the Internet, usually with a web browser on their phone, tablet or PC.

>> For Example:
> Google Apps
> Dropbox
> Microsoft Office 365

WHY AWS

More than 80% of Fortune 500 companies are powered by AWS cloud infrastructure.

Why AWS?

Location

Cost-Effectiveness

Automated Multi-Region Backups

Streamlined Disaster Recovery

Consistency & Reliability

Flexibility & Scalability

AWS by the Numbers

- Leading cloud service provider since 2006
- In the year 2013, the CIA bypassed IBM and chose AWS for private cloud.
- A few clients that use AWS:
    - Netflix
    - Twitch
    - LinkedIn
    - Facebook
    - BBC
    - ESPN
    - Adobe
    - Twitter

Questions?

Exploring AWS Essentials

Practical Session
aws.amazon.com

Identity & Access Management

Practical Session
aws.amazon.com

Questions?