

# Semblance

your face, your identity !

# Overview

- ❖ Semblance is a video monitoring web application built using modern facial recognition technology.



# Facial Recognition

- ❖ Face recognition is the latest trend when it comes to user authentication.
- ❖ Facial recognition are a result of the advancements in Computer Vision backed by Deep Neural Models like FaceNet, OpenFace, DeepFace etc.
- ❖ Facial Recognition System are typically of two types:
  - **Identification is 1:many**, i.e., System's where we have to find an unknown person in a dataset to answer the question " who is this person"?.
  - **Verification is 1:1**, where the system checks his or her biometric against a biometric profile that already exists in the database linked to that person's file in order to find a match.
- ❖ Semblance is designed as a Verification System.

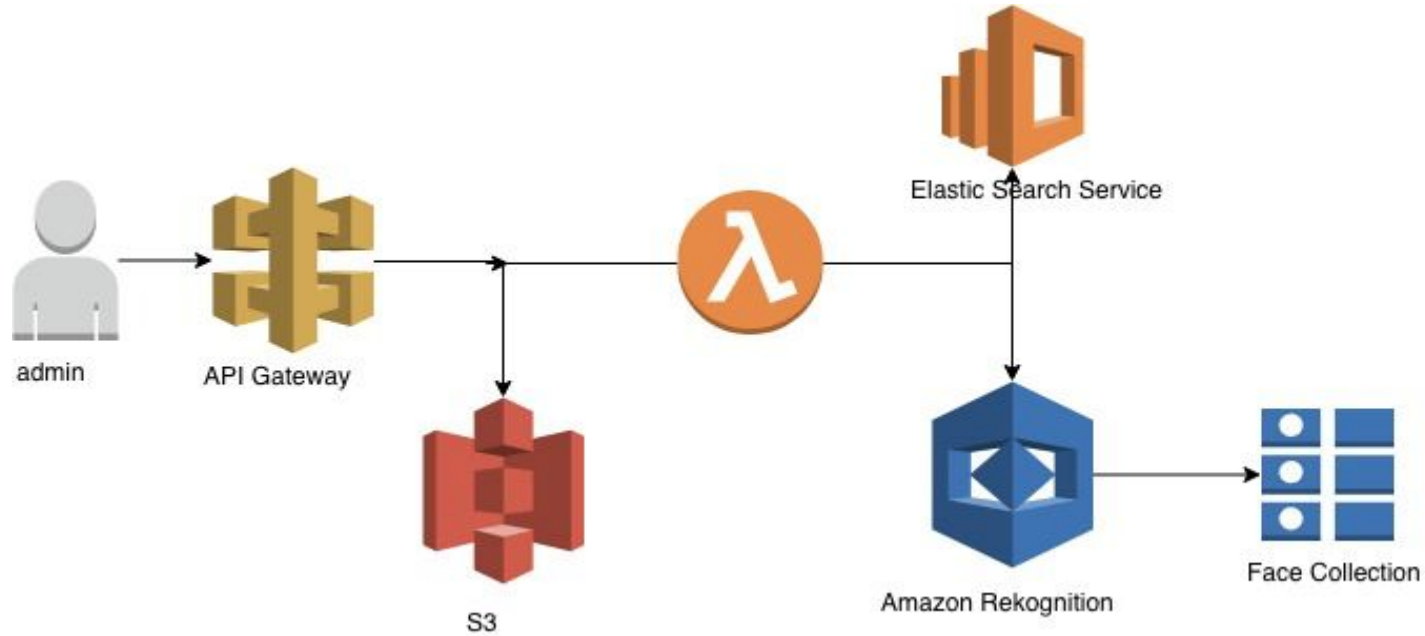


# Semblance

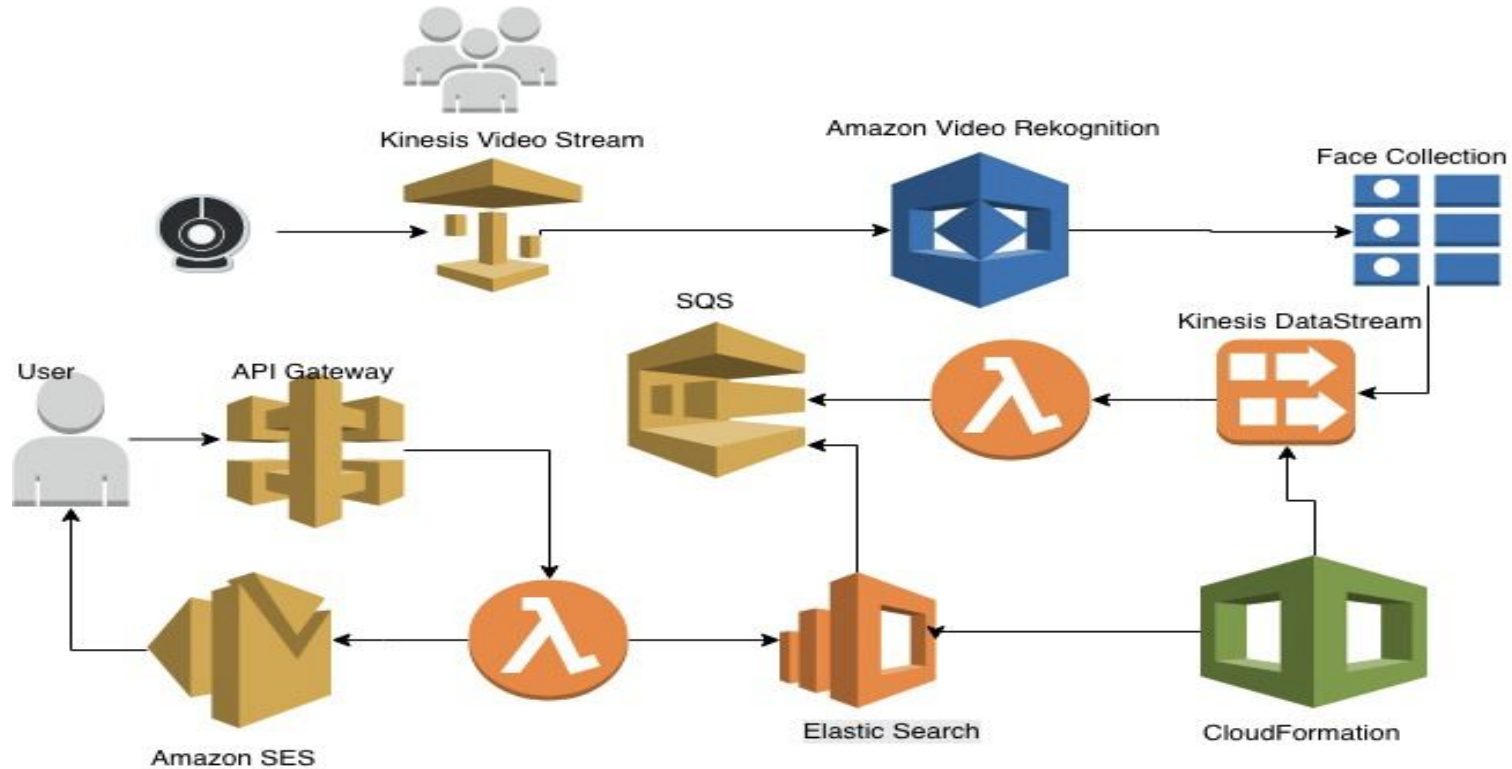
- ❖ In its current scope Semblance as an application is designed to facilitate monitoring and generating an attendance report of the all students attending a class through facial recognition. This entire process is automated requiring minimal User intervention.
- ❖ Semblance has two primary modules:
  - Module 1: Training Phase
  - Module 2: Monitoring and Report Generation Face



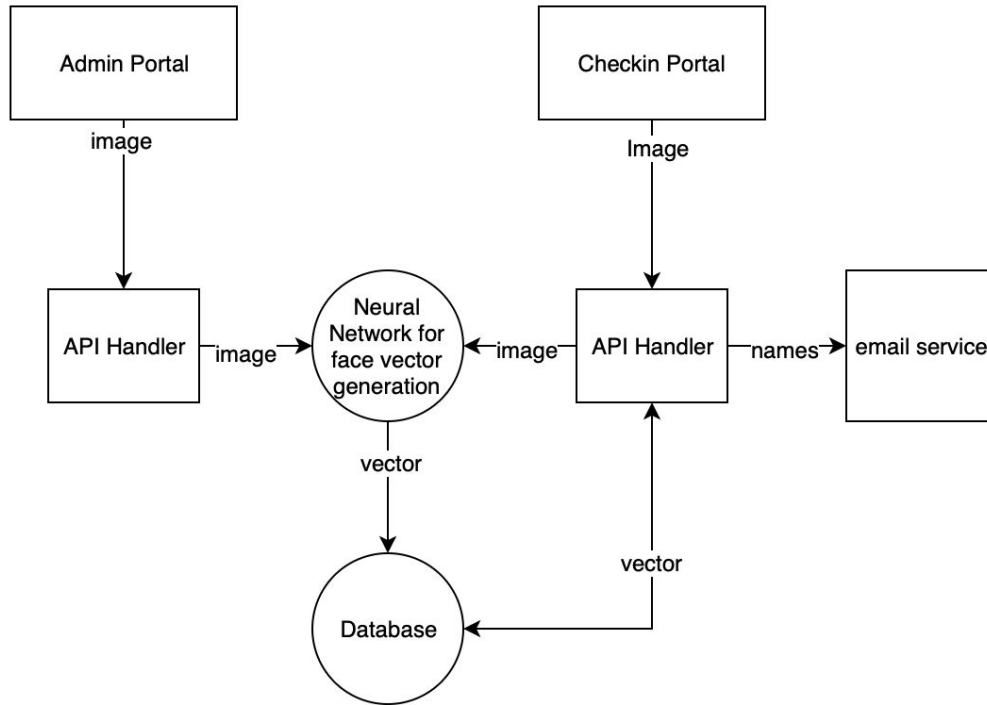
# Architecture - Training Phase



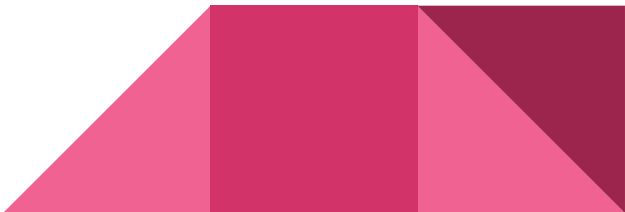
# Architecture - Monitoring Phase



# Flow-diagram



# AWS Services

- ❖ CloudFormation
  - ❖ AWS Image Rekognition and Video Rekognition
  - ❖ Kinesis Video Stream
  - ❖ Kinesis Data Stream
  - ❖ API Gateway
  - ❖ Lambda
  - ❖ Elastic Search
  - ❖ S3
  - ❖ SQS
  - ❖ Simple Email Service
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# Applications

- ❖ School
- ❖ College
- ❖ Offices
- ❖ Hospitals
- ❖ Subway stations
- ❖ Email account
- ❖ Other online accounts



# Demo

<http://semblance-web-app.s3-website-us-east-1.amazonaws.com/>



Thank You