



# TEXAM

-The Future of Online Exams-

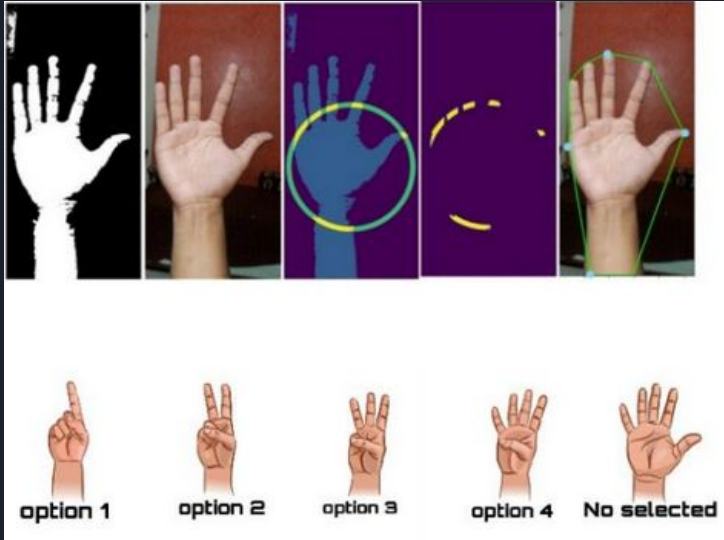
# Problem Statement

“With The advent of Pandemic , The inefficiency of online testing platforms surfaced along with bulk load of miscellaneous activity during online exam.”

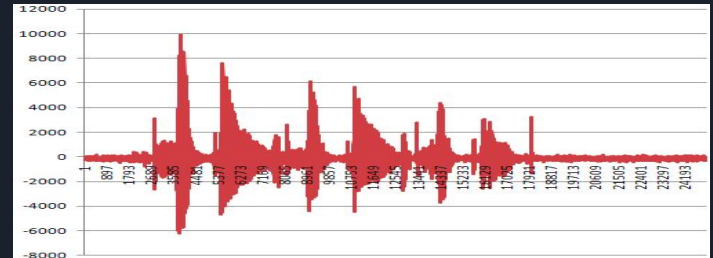


# Key Features

## Advanced Contact-Less System



## AI Monitored Video & audio stream





# The Idea

“Building a Robust AI driven System, to conduct AI proctored test, & minimizing the scope of Cheating to The Maximum Extent.”



TEXAM

# OUR TEAM

## Motto

“Solving Modern Problems with  
Modern Solutions”



Harsh Singhvi  
(Backend  
Developer)



Devottam Vaishnav  
(Debugger &  
Data analyst)



Garvit Chouhan  
(Front-end & AI  
Developer)

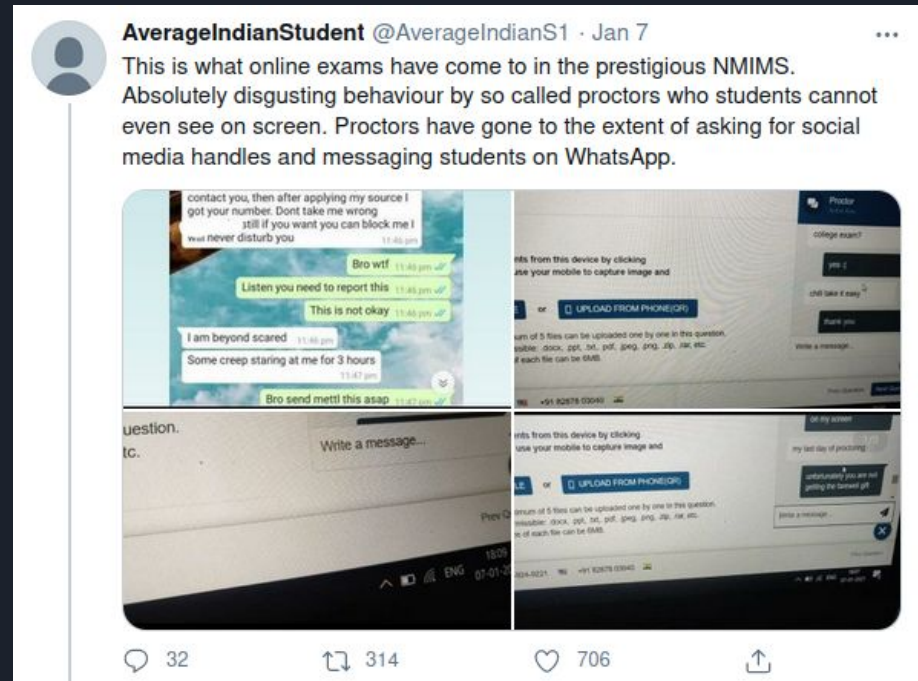


# Understanding the Problems

- 01 Inefficiency of Single Teacher To Monitor Multiple students Live Audio & Video Streams Simultaneously.
- 02 For Ideal Results there Should be One teacher per Student, but that's highly inefficient at small scale
- 03 Platforms Like mettl exists where One on One Proctoring Is Provided, Then What's the Problem? “Privacy-Breach”



# NMIMS Mettl CASE (Privacy Breach and Online harassment)



Source: <https://thewire.in/education/narsee-monjee-mumbai-harassment-online-exams-mettl>



## Key Features

### Single Executable Binary

- \*Extensive control
- \*Reduce Server Load



**OQAT Principal:**  
(One Question At a Time)





# Target audience

- Students, Learners, educators.
- Schools, Colleges.
- Online Platforms Such as Byju's, Vedantu, Unacademy
- Online Degrees from eminent Institutes Like IIT Madras, MIT.
- And All The AI Community Round The Globe.





# Features of Client Application:

**Face-Recognition:**  
Using HaarCascade.

**Gesture Recognition:**  
Convex Hull in OpenCV.

**Advanced Audio analysis:**  
Using Amplitude Array.



# Features of Back-End:

## Use of REST API:

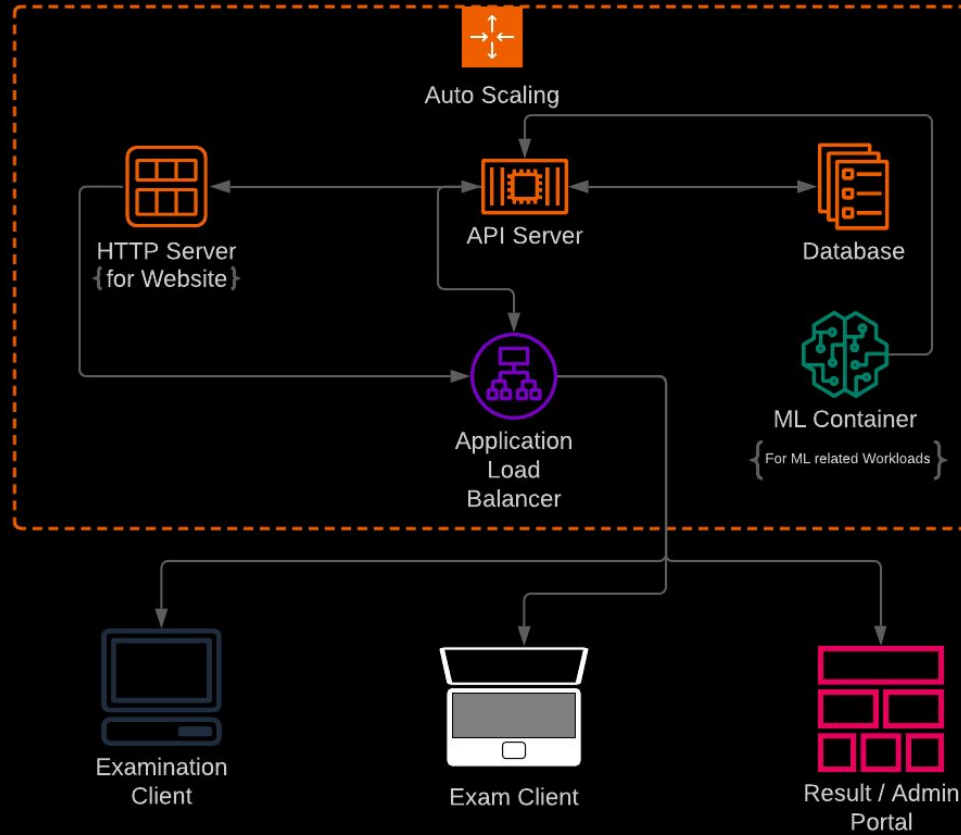
API Blocks provides limited indirect access for storing responses and accessing questions.

## Containerization of infrastructure:

High availability, Auto-scaling, Redundancy, Security.

## CI/CD pipelines:

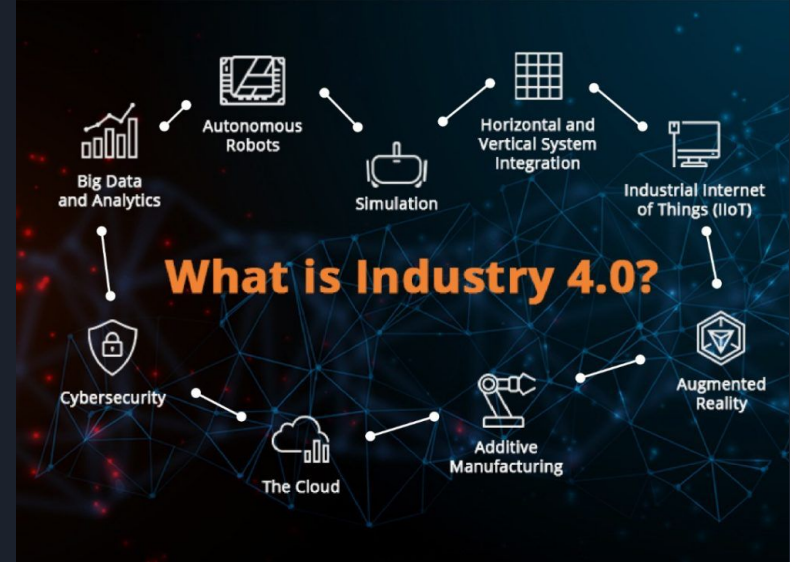
This Automates the build & Deployment process.



**TEXAM Infrastructure Diagram**

# Industry 4.0 Standards:

- ✓ Cloud Computing
- ✓ Artificial Intelligence
- ✓ System Integration and Automation
- ✓ Cyber Security
- ✓ Big Data



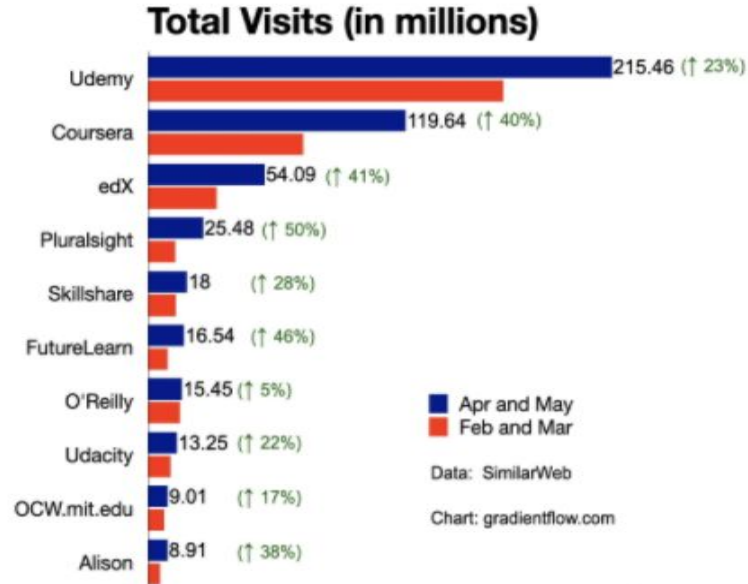


# Future Scope

1. **Smartphone detection & Multi-face distinguisher.**
2. **Emotion Analysis** to provide support to emotionally weak candidates.
3. Backup **AI rendering in backend server** for system that fails to process ML Workloads at client site.
4. Production Deployment on **Kubernetes Engine** on **AWS/Azure**. API authentication, more safety and security measures.
5. Video and Audio stream using **WebRTC**.



# Online Learning PLATFORMS



May 2020	
Site	AVG visit duration (minutes)
Udemy	12:25
Coursera	15:00
edX	8:16
Skillshare	5:29
FutureLearn	47:01
Pluralsight	12:11
O'Reilly	6:29
Udacity	19:31
Alison	15:02
OCW.mit.edu	3:36



*The End*