ClassNow

Seamless Education, anywhere!
Project Documentation

Introduction

ClassNow is an e-learning platform that aims to bridge the gap between online and offline learning, making the entire experience seamless and simple to use.

Completed Functionality

- Login and Sign-Up Platform
- Creation of MCQ Test/Assignment
- Classroom Creation and Student Joining
- OpenCV Deep Learning based Face Authentication for students.

Installing ClassNow on your PC:

ClassNow requires certain dependencies in order to run:
- MySQL 8.0
- Flask
- OpenCV
- Scikit

Steps to Install:

1. Download the source files to a folder.
2. Import classroomdb.sql to your MySQL instance using workbench. It is available in the Database Folder
3. Open a command prompt in the directory of the source files.
4. Run server.py using the command: **python server.py**
5. You will now be able to access the ClassNow interface using any browser @ localhost:5000/login

Login Credentials for testing:

Student
User: test@test.com
Password: testpass

Faculty
User: test2@test.com
Password: testpass

Admin
User: info.returnsolution@gmail.com
Password: testpass

Modules in Project

- Login – Basic login module with hashed password storage in DB, single login module for multiple roles. Automatic detection of roles.
- Sign Up – Basic signup module.
- Student Dashboard – Shows the student the enrolled classes and any assignments that are active.
- Faculty Dashboard – Shows the faculty created classrooms, allows them to create assignments and meet links. Also allows teachers to create new classrooms.
- DL OpenCV Face Authentication – Module to authenticate users based on Deep Learning Facial Recognition algorithms. (Front-end under dev)

Pending Functionality

- Dynamic meeting creation to combine offline and online classes.
    This will allow teachers to seamlessly present material to the students whether they are physically present in the class or online. This will be done via screensharing and using their mobile microphone.

- DL Based Face Authentication and Proctoring
    Allows for automatic authorization of student and proctoring during examination using microphone and webcam. Functionality available for spoofing of video detection.

- Test Taking Environment
    Creation of a secure test taking environment.