

CS1504 - Artificial Intelligence

Session - 01

M. GAYATHRI

185001050

1) a) FACE RECOGNITION BASED SMART ATTENDANCE

PERFORMANCE	ACCURACY OF CAPTURING, SCANNING EFFICIENTLY, SPEED, DATA, STORAGE
ENVIRONMENT	CLASSROOM, STUDENTS, TEACHERS, LIGHT INTENSITIES
ACTUATORS	SCANNER, ATTENDANCE PORTAL, DATA CONVERTOR
SENSOR	CAMERA, DETECTOR, SCANNER, MOVEMENT SENSOR

- \* Performance measure includes accuracy of capturing, efficiency of scanning rate, speed of recognition, data usage efficiency and less storage space.
- \* Environment measure includes classroom, students, teachers, capturing details in low light intensities and weather conditions.
- \* Actuators are scanner, attendance portal, data conversion from recognition to provide attendance.
- \* Sensors include detection like facial and movement detection.

## B) ONLINE AUTONOMOUS PROCTORING SYSTEM

PERFORMANCE MEASURE: \* Minimise lapses of academic integrity during the exam

- \* Maximum number of video channels it can handle without loss of efficiency (max  $n$ )

ENVIRONMENT: \* The  $n$  video communication channel data.

ACTUATORS: \* Display warning to user if lapse detected.

- \* Compile statistics of all  $n$  students for the exam issuer.

SENSORS: \* Cameras.

- \* Performance measure to decrease lapses of ~~int~~ integrity during conducting examinations.
- \* Environment measure is the video communication channel data quality
- \* Actuators measure is the warnings to be displayed during lapse and stats of exam users.
- \* Sensors are the cameras to track students.

c) ROBO CUP ROBO SOCCER PLAYER.

PERFORMANCE:	Get Goal, Win Game, Score of the team
ENVIRONMENT:	Soccer, Players, Soccer Field, Ball
ACTUATORS:	Robot legs, Navigator, Front view camera.
SENSORS:	Camera, Touch Sensors, Orientation sensors.

- \* Performance measure of the soccer playing robot is to score goals for its team and win the game by increasing the score of its team.
- \* Environment measure of the robot is the soccer ball, the no-players and the soccer field in which the robot has to play. The robot can be customized according to the dimensions of the field.
- \* Actuators measure includes performance of robot legs, navigating legs equipments, front view camera to have a vision of things in front of it.
- \* Sensors measure includes orientation sensors to detect orientation to be changed, touch sensors and camera to view obstacles in front of it during navigation.