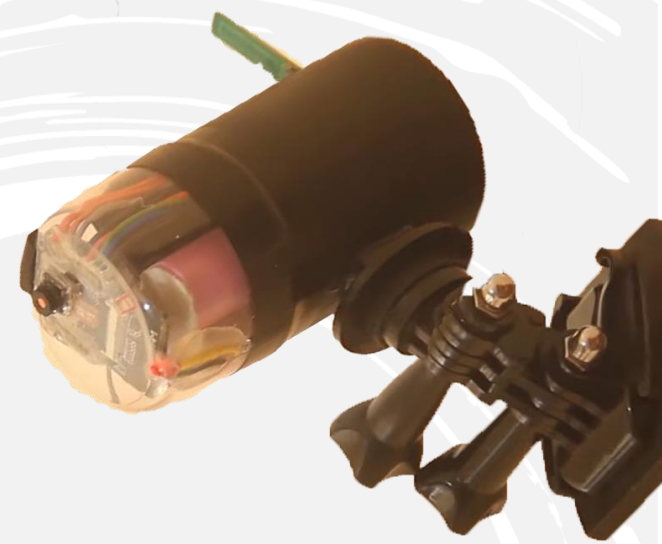


Smart Entry System (Smart Surveillance System)



Agenda Style

INTRODUCTION 01

PROBLEM SET 02

OUR SOLUTION 03

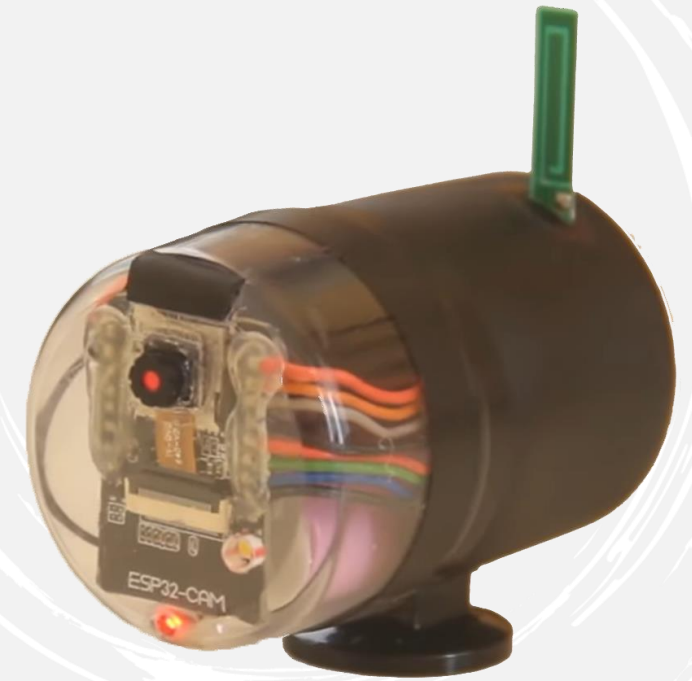
PROJECT INFOGRAPHIC 04

HARDWARE & IOT 05

AI 06

Website & Mobile App. 07

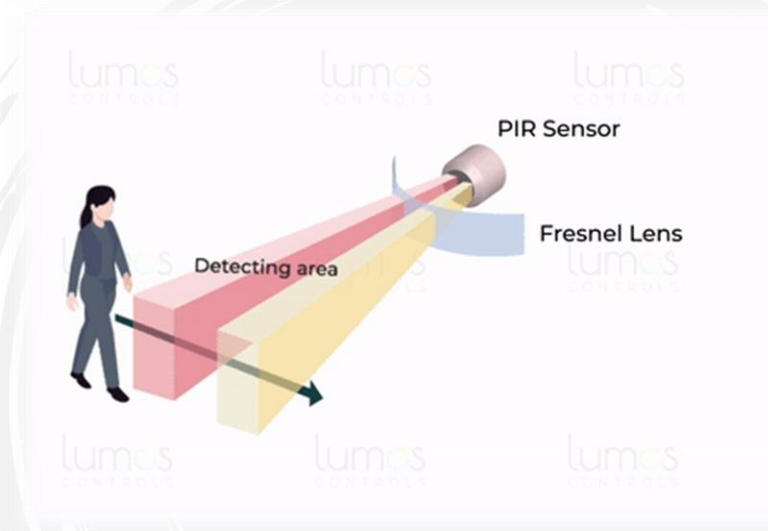
FUTURE WORK 08



INTRODUCTION

Introduction

- **It's Impractical To Use Large Number Of Sensors To Make A Smart Device.**
- **Traditional Smart Home Have Enormous Sensors For Every Task.**
- **How We Can Replace A Lot Of These Sensors With Just One Device To Perform All These Tasks.**



PROBLEM SET

Problem Set

01

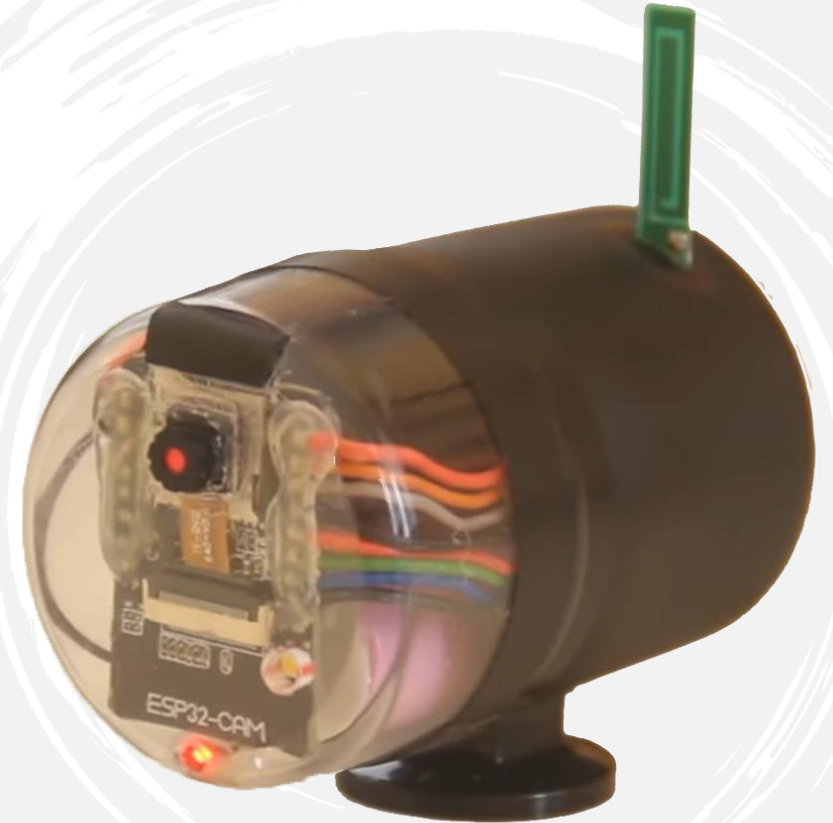
High cost for electronic components

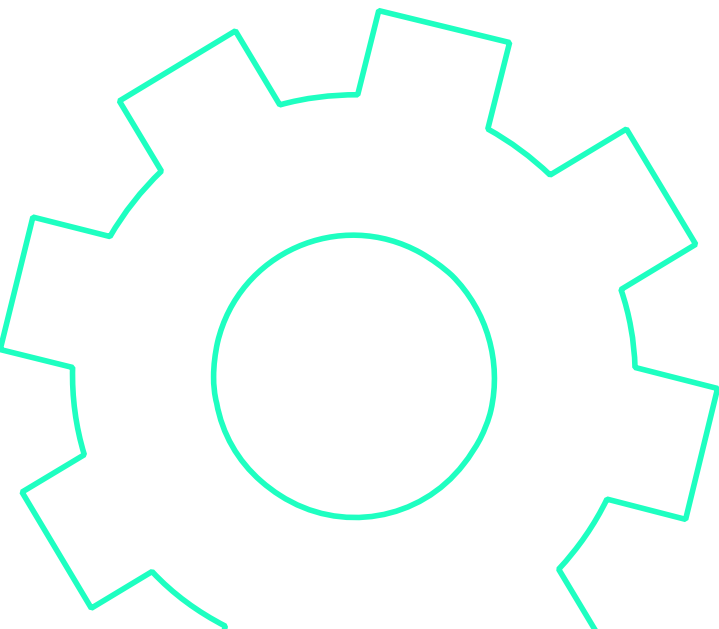
02

**Consumption intensive electricity
in security System devices**

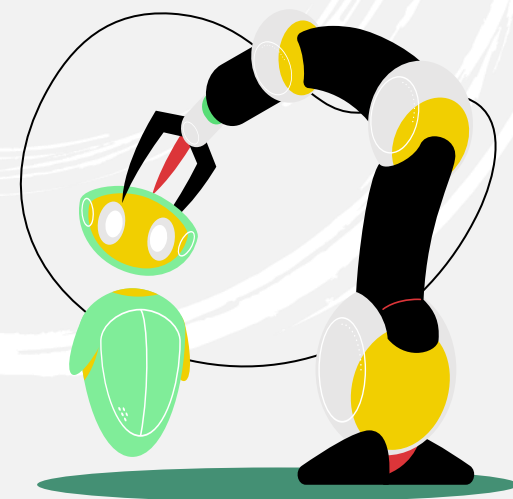
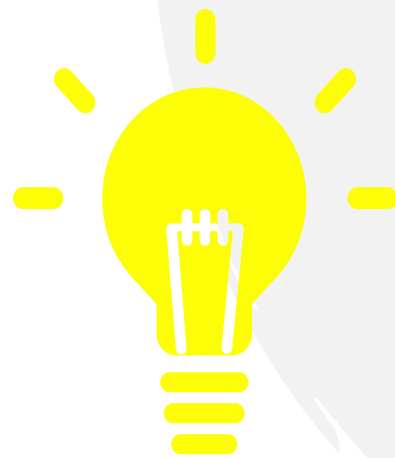
03

**Accidents of theft of houses and
many others**





OUR SOLUTION



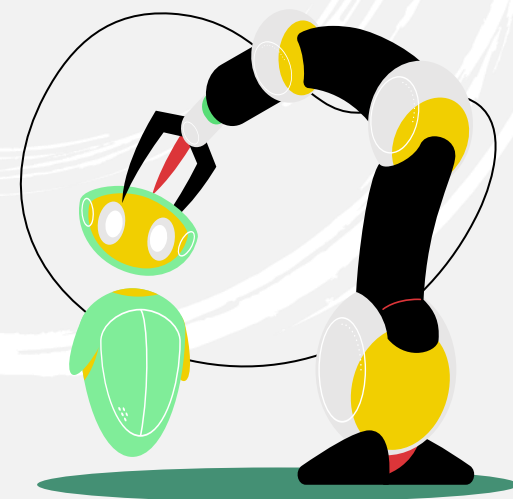
OUR SOLUTION

➤ **We build a full security system with camera that can perform these tasks. We now can get:**

- ☐ Night and light detection
- ☐ Face detection
- ☐ Face recognition
- ☐ Motion detection
- ☐ Object detection (persons, cars, ...)



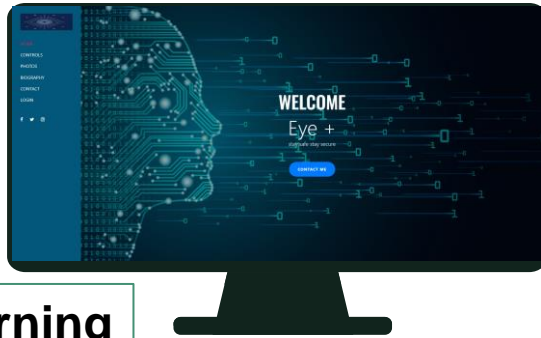
WORK OVERVIEW



WORK OVERVIEW

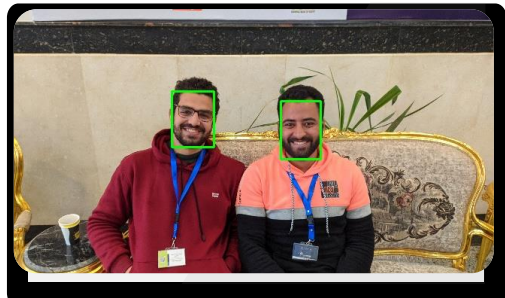
Web application

Display data



Deep learning

Face Detection



IoT

Send & Receive data



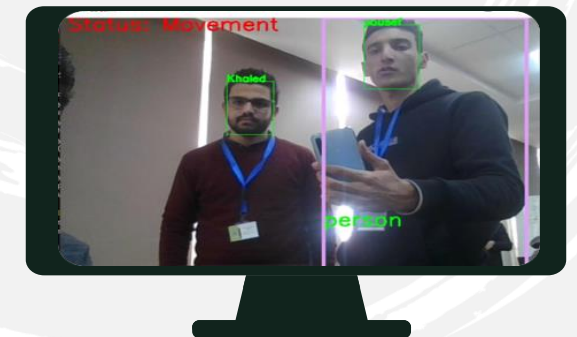
Deep learning

Face Recognition



Deep learning

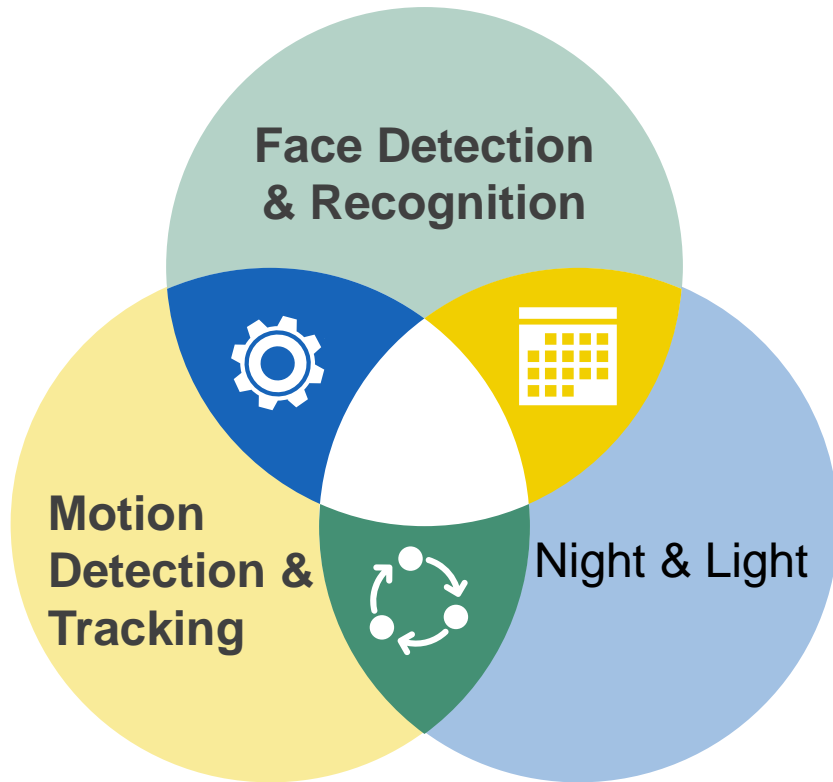
Object Detection



Day & Night



WORK OVERVIEW



Night & Light

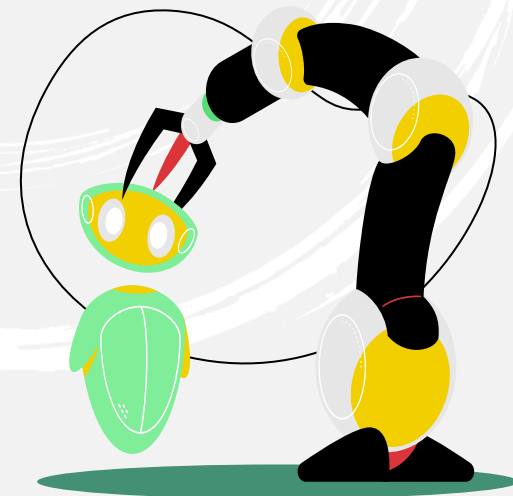
We assign a threshold to determine if it's day or night. If the average of the brightness of the image greater than the threshold, it will be a daytime image and vice versa.

Face Detection & Recognition

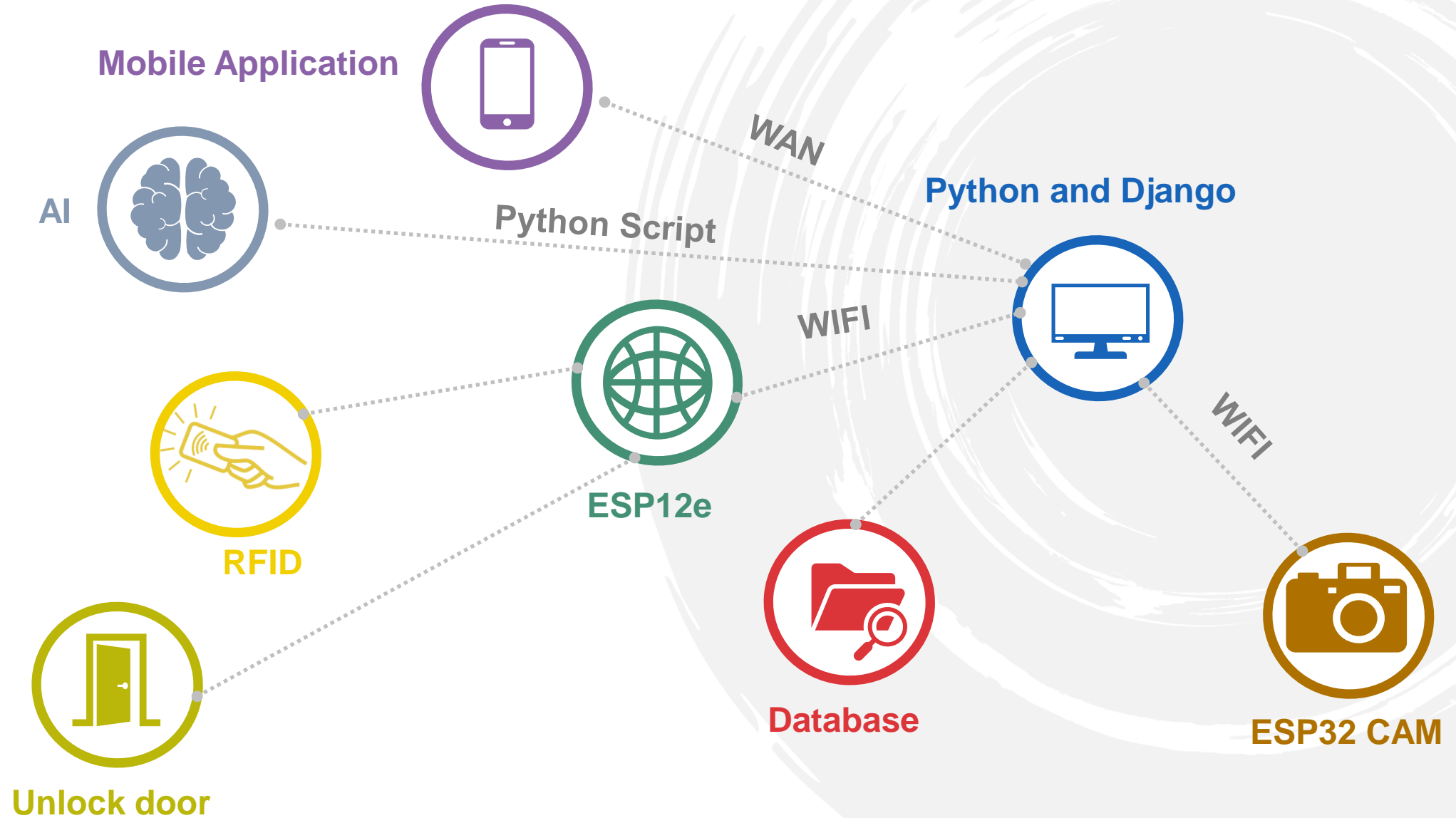
Real-time face detection , recognition we used:
We trained state of the art model to detect
The faces of the family members and as a method of authentications while
Notifying the presence of detected strangers.

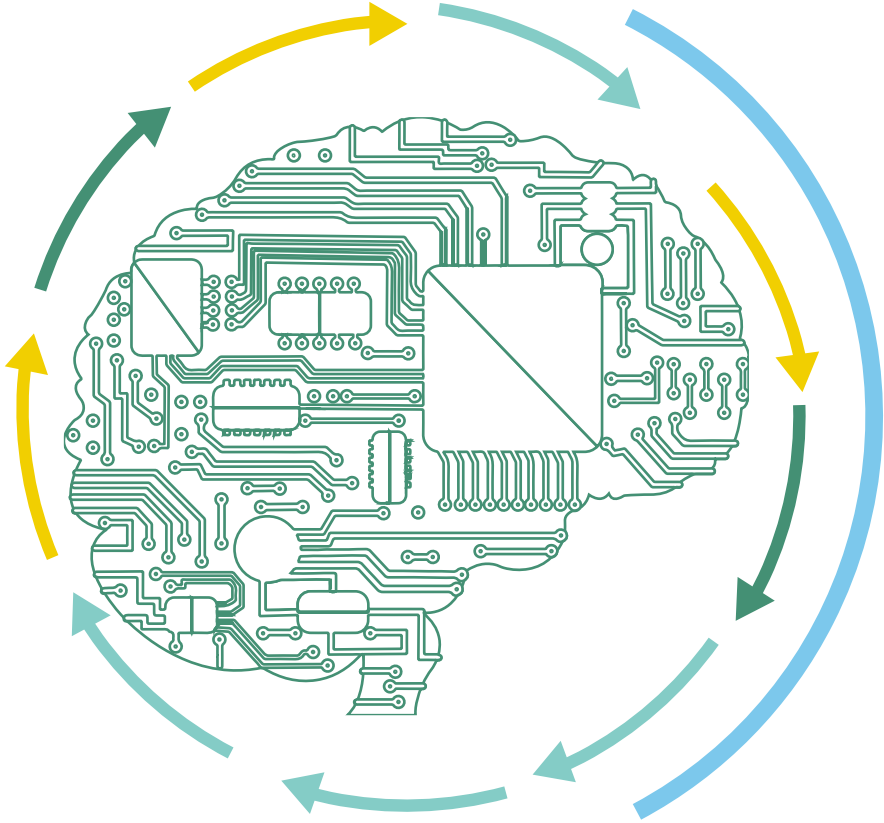
Motion Detection

- ☐ The video is series of the images. (Fps)
- ☐ How the motion detection work?!
- ☐ By doing subtract ion between the previews image and the current one, we simply detect

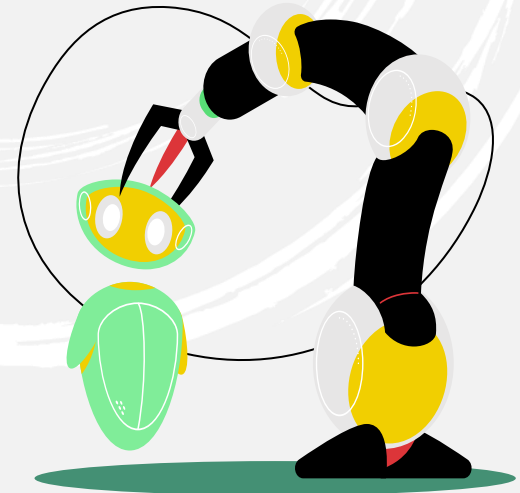


PROJECT INFOGRAPHIC





HARDWARE & IOT



HARDWARE & IOT

To complete the eco system we used:

- RFID door lock enabled to control the opening and closing of the doors with additional access to it anywhere and any time
- Online access to the door lock anywhere at any time and schedule door opening for events like family visits and invitations.



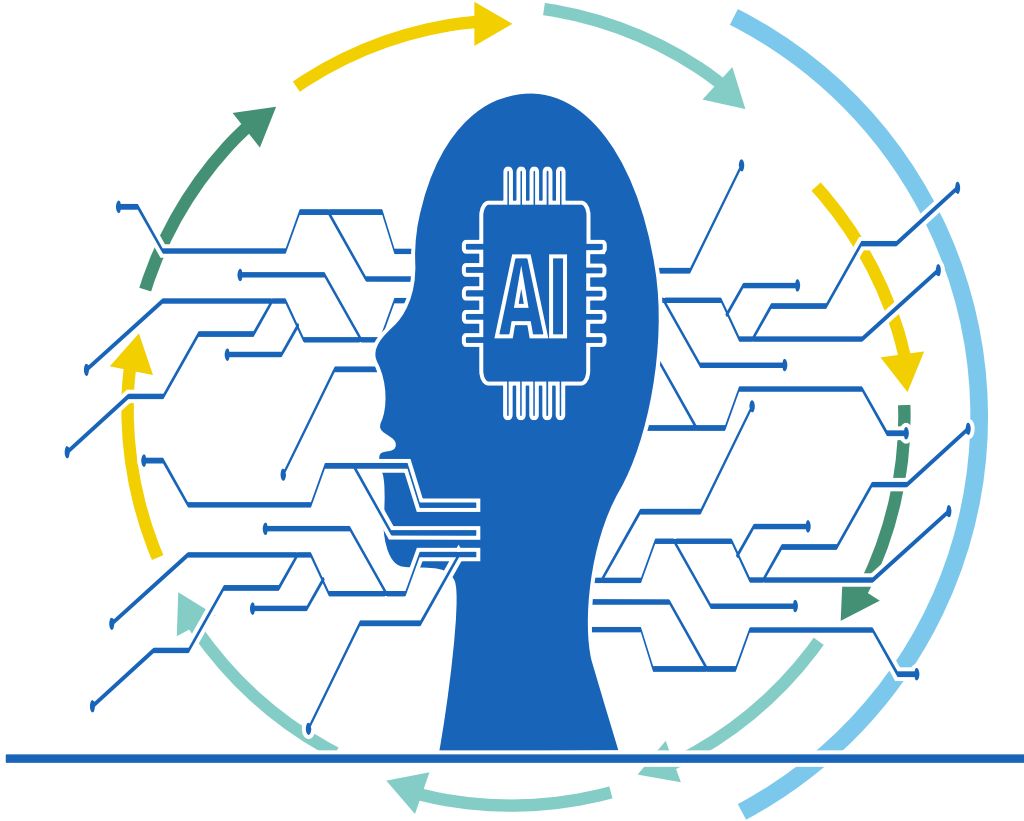
HARDWARE & IOT

Attendance system

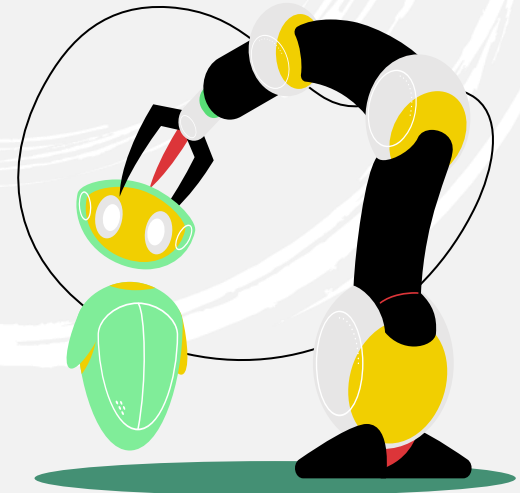
- We built an attendance system to tracking any one in the facilities and know the entry time.
- Making it impossible for unauthorized person to enter without alerting the owner.



RFID Attendance System Main Home Users Manage Users Logout					
Search User by ID Search					
ATTENDANCE					
ID.No	Name	CardID	Phone Number	Date	Time In
6	Saleh	82484211	1027071056	March 26, 2022	10:05 a.m.
6	Saleh	82484211	1027071056	March 26, 2022	10:05 a.m.
6	Saleh	82484211	1027071056	March 26, 2022	10:04 a.m.
6	Saleh	82484211	1027071056	March 26, 2022	10:04 a.m.
6	Saleh	82484211	1027071056	March 26, 2022	10:03 a.m.
6	khaled	82484211	12	March 26, 2022	10:02 a.m.
6	khaled	82484211	12	March 26, 2022	10:02 a.m.



AI & DEEP LEARNING



Deep Learning



PyTorch



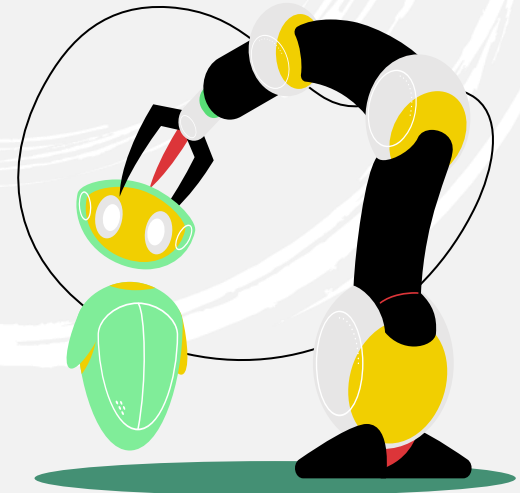
django



OpenCV
DNN





FINANCIALS








Financials

- Main Project

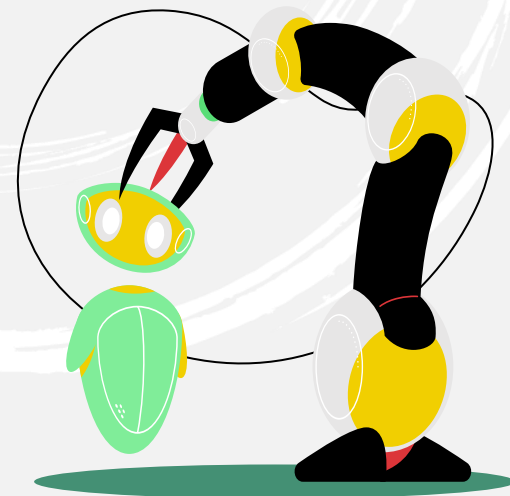
Component	Price	Real Component
ESP32 Cam	350	
Battery 5V	50	

- Complementary Project

Main Component	Price	Real Component
ESP 12e	40	
RFID	70	
Servo Motor	50	
Relay	7	
Battery 12V	30	

FUTURE WORK

- **Mask detection for industrial facilities**
- **Fire detection**
- **Smart object tracking mode**
- **Direct emergency contact**
- **Integrate with bigger smart eco-systems**
- **Two-way audio compatible systems**





THANKS