**Title: AI Eye Prognosticator**

**Group No: 6**

Members:

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Project Type: Inhouse

Project Description:

Aim of the project is to implement a system which is capable of extracting information from the CCTV footages by using human detection algorithms and human recognition algorithms to derive valuable insights from the footages. The system uses YOLOv3 human detection algorithm (CNN Based Algorithm) to detect humans. This data is further used by Machine Learning algorithm to make predictions regarding the human population density at a particular location, human count and human recognition.

Hardware Requirements:

* Operating System – Windows 7,8, 10 / Ubuntu
* Processor – dual core 2.4 GHz+(i5 or i7 series Intel processor or equivalent AMD)
* GPU- NVIDIA GeForce 1080 Ti GPU
* RAM – 4GB
* Hard Drive – 256 GB or larger solid-state hard drives
* Video capturing camera / CCTV

Software Requirements:

* Python 2.7.15
* PIP 2.7
* Pycharm IDE
* YOLOv3
* OpenCV
* Google CoLAB

Applications:

* Shopping Malls - To get insights like, population density at a shop.
* Colleges/Offices – To get number of people/students entered into college.
* Retail shops – To get data like which product is least visible to consumers.
* Streets/Road – To make optimum use of space.

References:

1. You Only Look Once: Unified, Real-Time Object Detection - <https://pjreddie.com/media/files/papers/yolo.pdf>
2. Real-time object detection and tracking in an unknown environment - <https://ieeexplore.ieee.org/document/6141394>
3. Object Detection Using Convolutional Neural Networks - <https://ieeexplore.ieee.org/document/8650517>