Use Cases

- Personal Protective Equipment (PPE) Detection
- Face Recognition
- Fall Detection

Personal Protective Equipment (PPE) Detection

Requirements

1. Camera in the right position

Implementation steps & Timing

1. Data preprocessing - Conversion of videos to images for data annotation (this process can take 1 or 2 days Approx)
2. Data Annotation (1.5 months or max 2 months).
3. Computer Vision model training, (this process can take 1-2 weeks)
4. Creation of a Dashboard (this process can take 1-2 weeks).
5. Development of code on Jetson Nano (this process can take 2-3 weeks)
6. Testing of the product to reduce false detections or improve models (this process can take max 1 week).
7. Deployment on Construction Site (this process can take 3-5 days)

Steps 3, 4, and 5 will be done in parallel.

Camera Position

1. The camera position will need to be as shown below.

Face Recognition

Requirements

1. Camera frontal view at both sides of the gate.

Implementation steps & Timing

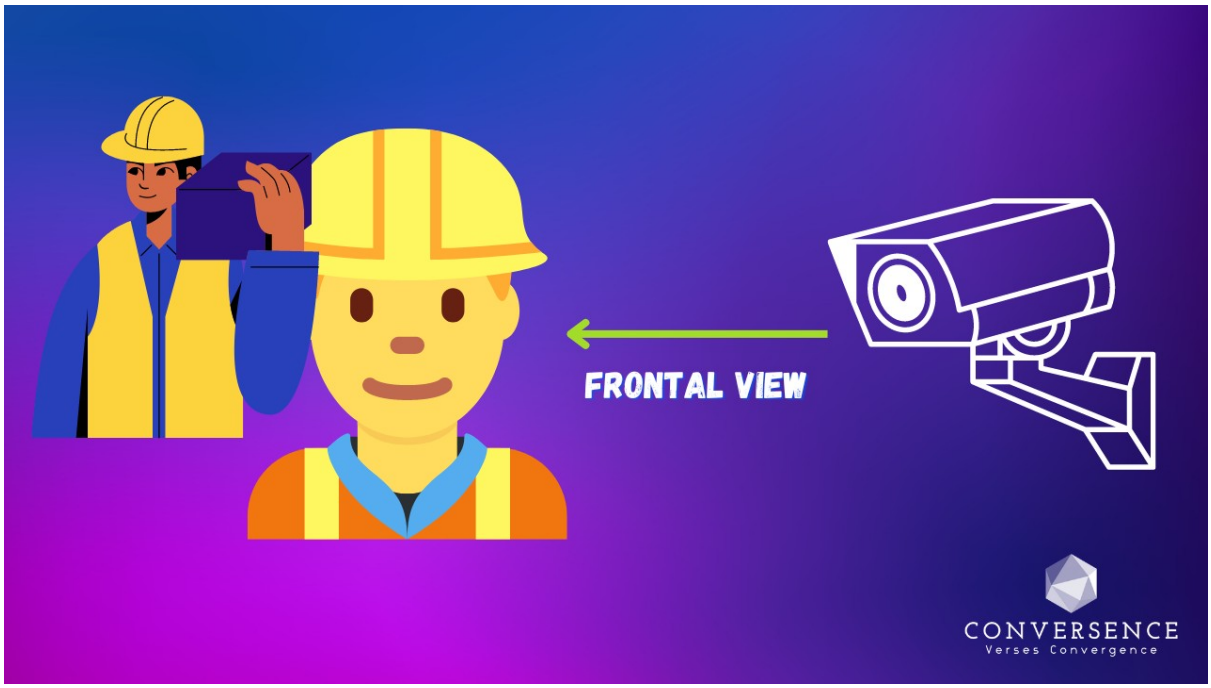
1. Data preprocessing - Conversion of videos to images for data annotation (this process can take 1 or 2 days Approx)

2. Data Annotation (This process can complete in 20-30 days or max 1.5 months).
3. Computer Vision model training (this process can take 1-2 weeks)
4. Creation of an attendance dashboard (this process can take 1-2 weeks).
5. Development of code on Jetson Nano (this process can take 1-2 weeks)
6. Testing of the product to reduce false detections or improve models (this process can take max 1 week).
7. Deployment on a Construction Site or some office (This process can take 2-3 days)

Steps 3, 4, and 5 will be done in parallel.

Camera Position

1. The perspective view is good. But it will be much easier if the camera position will be as shown below.



Note: The more the objects will be near to the camera, the better the results can be obtained based on the optimized features map.

Fall Detection

Requirements

1. Right position of the camera

Implementation steps & Timing

1. Data preprocessing - Conversion of videos to images for data annotation (this process can take 1 or 2 days Approx)

2. Data Annotation (this process can get done in 20-30 days or max 1.5 months).

3. Computer Vision model training (this process can take 1-2 weeks)

4. Creation of a fall counts analytics dashboard (this process can take 1-2 weeks)

5. Development of code on Jetson Nano (this process can take 1-2 weeks)

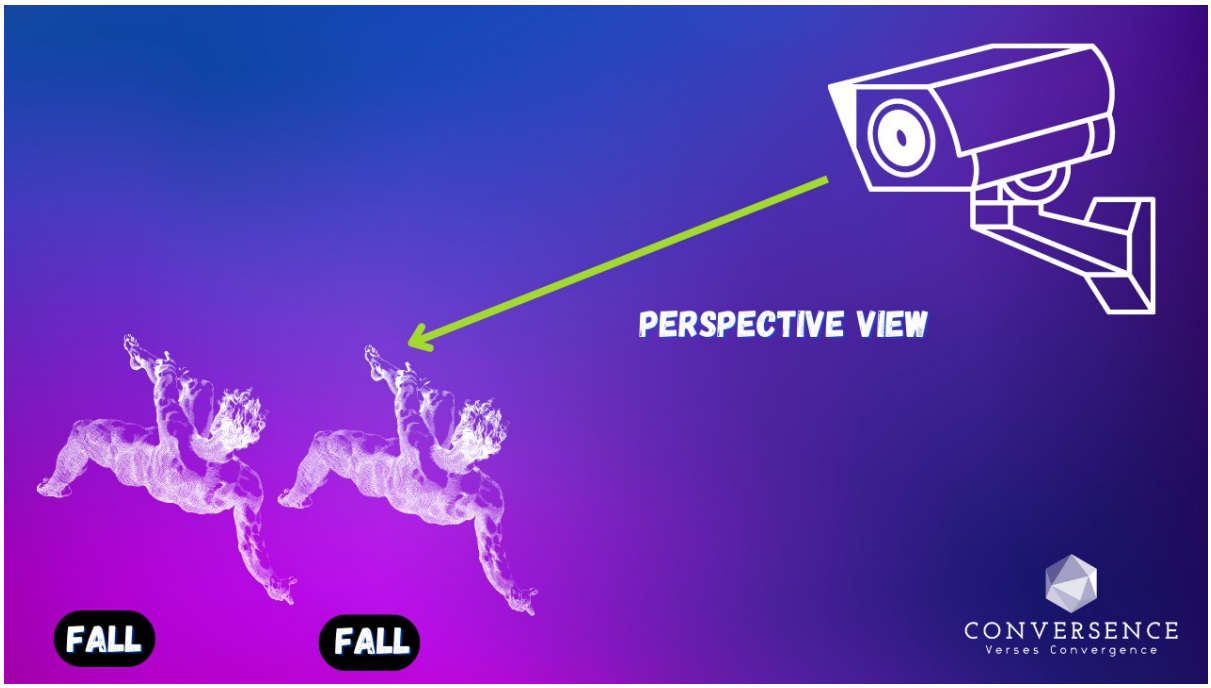
6. Testing of the product to reduce false detections or improve models (This process can take max 1 week).

7. Deployment on a Construction Site or some office (This process can take 2-3 days)

Steps 3, 4, and 5 will be done in parallel.

Camera Position

1. The camera position will need to be as shown below.


PERSPECTIVE VIEW
FALL
FALL
CONVERSENCE
Verses Convergence