

# ANN

# Capstone Project

Project: Video Recognition Using YOLOv7 in Google Collab

Luqman Mohd Zaid

# Objectives

- Understand the basics of YOLO v7 and object detection
- Implement YOLO v7 using Google Colab
- Train a YOLO v7 model on a video dataset
- Evaluate the trained model on your own video

# Libraries Used

```
from google.colab import drive
```

- Mount Google Drive

```
import os
```

- Access Google Drive Folder

```
!git clone  
https://github.com/pHidayatullah/yolov7
```

- Clone YOLOv7

```
import torch
```

- Check GPU

```
import shutil
```

- Copy and paste videos to put in the right folder for the code to run

```
import matplotlib.pyplot as plt
```

- Function to Show Image



```
import matplotlib.image as mpimg
```

- Function to show Image



# Source Code

- [LuqmanCapstoneYOLOv7.ipynb](#)
- [CapstoneProjectLuqmanMZ.pdf](#)
- [Input Image File](#)
- [Output Image File](#)
- [Input Video File](#)
- [Output Video File](#)

# Image Input and Output



Input	Output
	

# Image Input and Output



Input	Output
	



# Video Input and Output

Input	Output
 <p>The input image is a wide-angle shot of a soccer match in progress. The field is green with white markings. Players in red and yellow jerseys are scattered across the field. The background shows a large crowd in the stands and various advertisements on the perimeter, including 'UNIBET' and 'bet365'. The scoreboard at the top left indicates 'WOL 0-0 LIV' and the time '05:20'.</p>	<p>It detects the players as person, and the ball as sports ball</p>  <p>The output image is the same soccer match scene as the input, but with object detection overlays. Blue bounding boxes are drawn around each player, and a label 'person' with a confidence score is placed above each box. For example, one player has a confidence of 0.75, another 0.81, and another 0.80. A bounding box is also drawn around the soccer ball, with a label 'sports ball' and a confidence of 0.88. The scoreboard at the top left now shows the time '05:21'.</p>

# Video Input and Output

Input	Output
	It detect the F1 vehicle as skateboard.
 A video frame from a race track showing two red and white F1 cars driving on a grey asphalt track. In the background, there are grandstands and a wall with 'PREMIER 2008' and '2 / 44' text. The video player interface at the bottom shows a progress bar at 0:12 / 1:24.	 The same video frame as the input, but with object detection overlays. A green box labeled 'person: 0.63' is around a person in the stands. Two yellow boxes labeled 'skateboard: 0.92' and 'skateboard: 0.84' are around the two F1 cars, respectively. The video player interface at the bottom is identical to the input frame.



Thank you!