



SYMBIOSIS INSTITUTE OF TECHNOLOGY (SIT)

PBL I Poster Presentation

Crowd Counting

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Introduction

As there is growth in population and major increase in public gatherings, there is a need of an efficient crowd counting system, that monitors and counts number of people and ensuring safety and well being of each individual at the event.

Results

Initially, we achieved an accuracy of 81.3% initially and gradually by increasing epochs, image size we reached the peak of 87.7% accuracy

Duration- The entire process lasted approx. 2 days

Objective

Analyze different datasets & existing systems and choosing the best for our project. Implement different algorithms on the existing systems and datasets. Comparing it with the results published.



Problem Statement

A Crowd Management System to address the inaccuracies in manual crowd counting at public gatherings, enabling real-time monitoring, efficient resource allocation, and enhanced security measures.



Experiment	Image Size	Batch Size	Epochs	Rotation (Degrees)	Accuracy
1	640	4	15	0°	81.3%
2	640	16	100	0°	83.0%
3	1024	64	300	0°	87.7%

References

- <https://github.com/ultralytics/yolov5>
- <http://shuoyang1213.me/WIDE-RFACE/>

Methodology

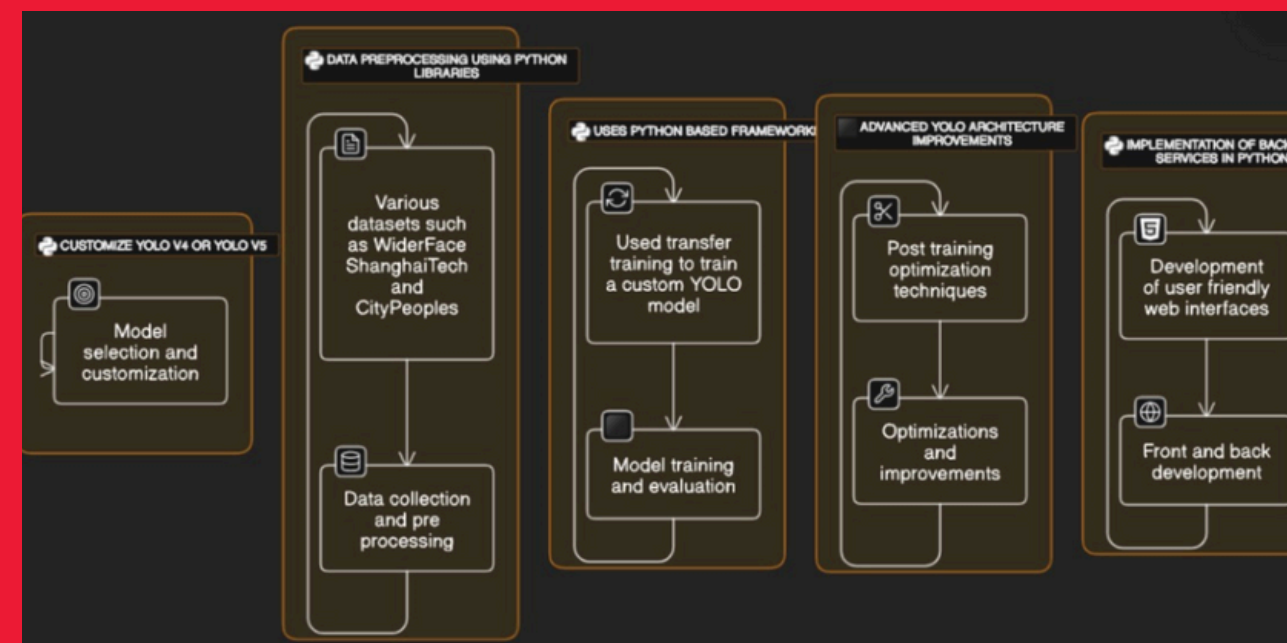
Modeling: YOLO (v5) tailored for real-time crowd counting.

Data & Training: WiderFace dataset is used for training model

Model: It is trained at 300 epochs

Image Size: 1024

Batch Size: 64



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