Weapon Detection

Tech Warriors

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Overview

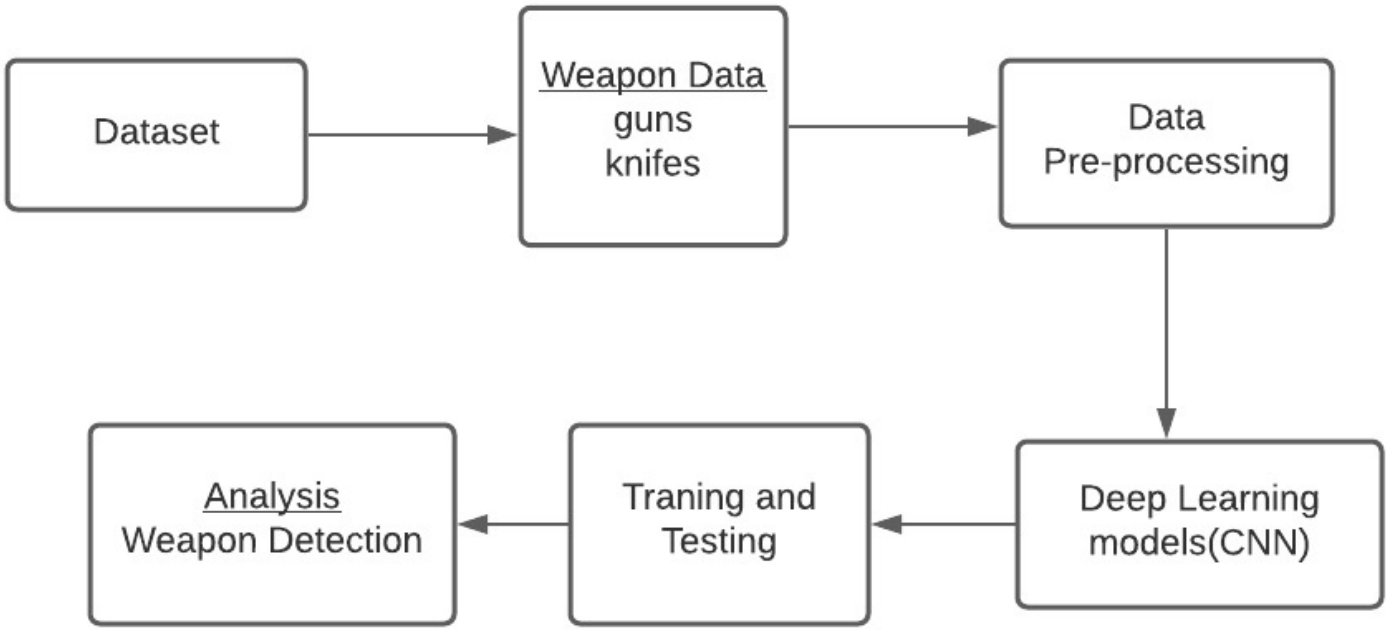
Introduction

- Now a days security has become biggest concern.The crime rate across the globe has increased mainly because of the frequent use of weapons during violent activity.
- For a country to be economically strong, it must ensure a safe and secure environment for investors and tourists. We need a system that can automatically detect these weapons

Objective

- Our model is useful for recognizing and identifying the weapons based on trained images.
- We are using two types of weapons guns and knifes. Guns include both short guns and long guns.The approach to this problem is done by using CNN algorithm.This is helpful in public places where there are more criminals and attacks.

Approach


Dataset
Weapon Data
guns
knifes
Data
Pre-processing
Deep Learning
models(CNN)
Traning and
Testing
Analysis
Weapon Detection

Steps for training the model

- Data Collection
- Building CNN Model
- Training the model
- Testing the model
- Integrating with flask
- Deploying

Tech Stacks

- Python 3.8.5
- TensorFlow
- Keras
- Flask
- GitHub
- LaTeX

Problems May Faced

- We faced some challenges while integrating model with web page
- Due to shortage of data we faced some issues in extending dataset
- As we are working remotely, we may face some communication issues

Learnings

- CNN algorithm
- Flask
- How to integrate model with webpage

References

- https://towardsdatascience.com/a-comprehensive-guide-to-convolutional-neural-networks-the-eli5-way-3bd2b1164a53
- https://www.researchgate.net/publication/349281117-Weapon-Detection-in-Real-Time-CCTV-Videos-using-Deep-Learning
- https://tensorflow.org

Github link

- https://github.com/ksarvani2000/Weapon-detection

Thank You