SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
FACULTY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF DATA SCIENCE AND BUSINESS SYSTEMS

18CSP107L- MINOR PROJECT

Weapon Detection using Deep Learning Architecture

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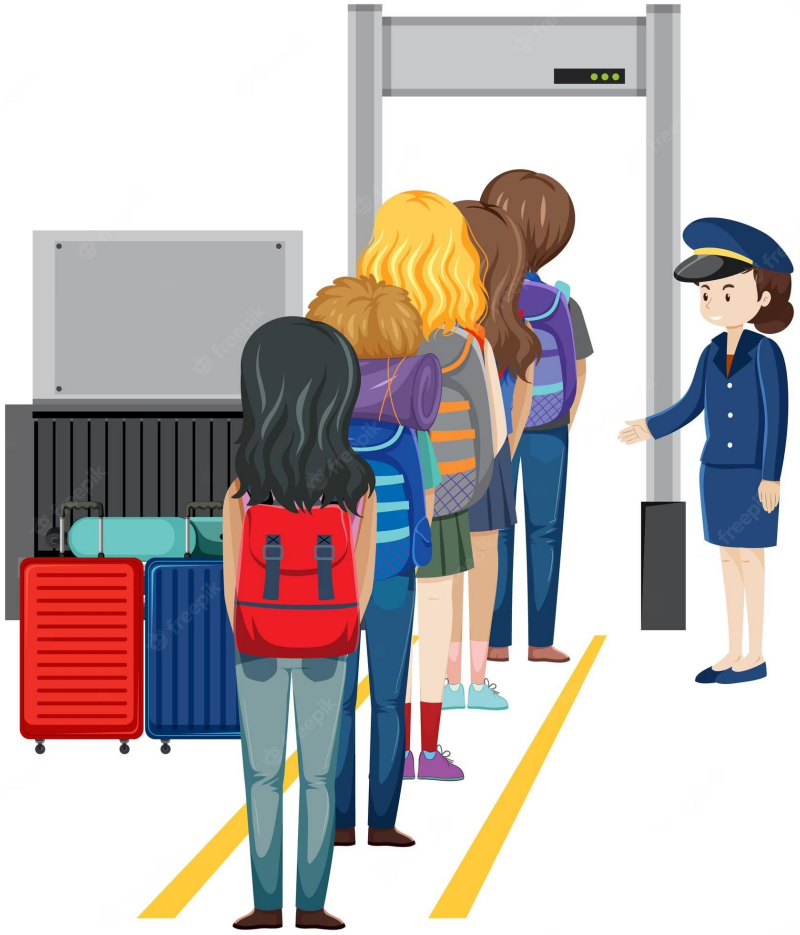
Introduction

- **Objective**

To develop a robust and efficient weapon detection system using deep learning algorithms. By harnessing the capabilities of neural networks and convolutional neural networks (CNNs), we aim to create a system capable of accurately identifying weapons in various environments and scenarios.



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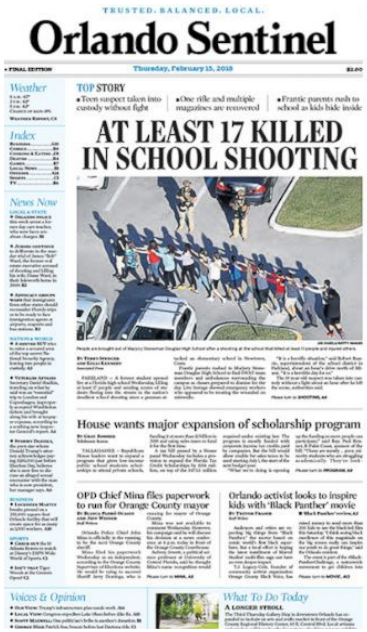
Motivation



TRUSTED. BALANCED. LOCAL.

Orlando Sentinel

Thursday, February 15, 2018

TOP STORY

- Teen suspect taken into custody without fight
- One rifle and multiple magazines are recovered
- Frantic parents rush to school as kids hide inside

AT LEAST 17 KILLED IN SCHOOL SHOOTING

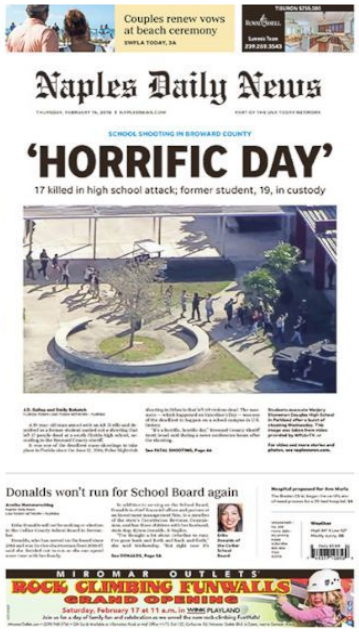
House wants major expansion of scholarship program

OPD Chief Mina files paperwork to run for Orange County mayor

Orlando activist looks to inspire kids with 'Black Panther' movie

Voices & Opinion

What To Do Today



Couples renew vows at beach ceremony

Naples Daily News

SCHOOL SHOOTING IN BROWARD COUNTY

'HORRIFIC DAY'

17 killed in high school attack; former student, 19, in custody

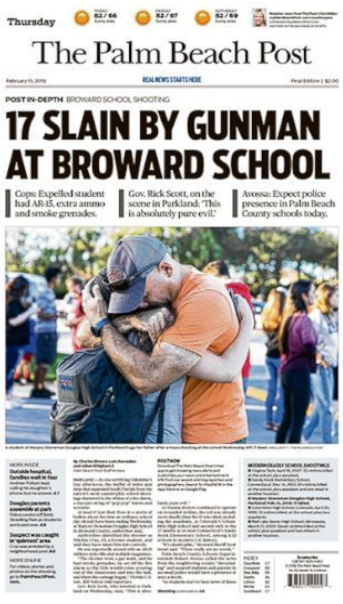
Donalds won't run for School Board again

MIROMAR OUTLETS

ROCK CLIMBING FUNWALLS

GRAND OPENING

Saturday, February 17 at 11 a.m. in YORK PLAYLAND



Thursday

The Palm Beach Post

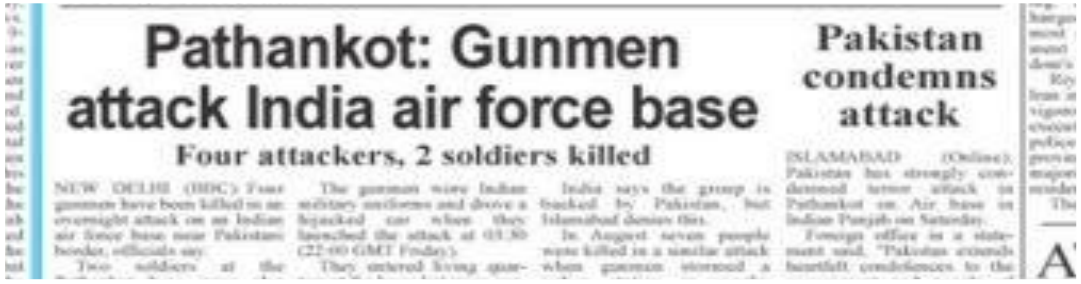
POST-IN-DEPTH BROWARD SCHOOL SHOOTING

17 SLAIN BY GUNMAN AT BROWARD SCHOOL

Cops: Expelled student had AR-15, extra ammo and smoke grenades.

Gov. Rick Scott, on the scene in Parkland: 'This is absolutely pure evil.'

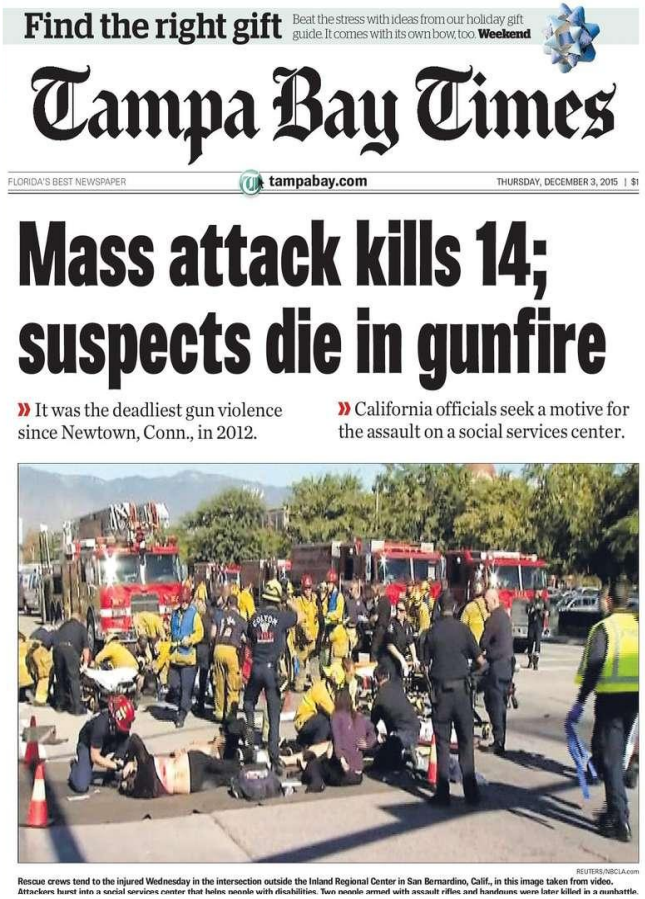
Avossa: Expect police presence in Palm Beach County schools today.



Pathankot: Gunmen attack India air force base

Four attackers, 2 soldiers killed

Pakistan condemns attack



Find the right gift Beat the stress with ideas from our holiday gift guide. It comes with its own bow, too. Weekend

Tampa Bay Times

FLORIDA'S BEST NEWSPAPER tampabay.com THURSDAY, DECEMBER 3, 2015 | $1

Mass attack kills 14; suspects die in gunfire

» It was the deadliest gun violence since Newtown, Conn., in 2012.

» California officials seek a motive for the assault on a social services center.

REUTERS/NBCLA.com

Rescue crews tend to the injured Wednesday in the intersection outside the Inland Regional Center in San Bernardino, Calif., in this image taken from video. Attackers burst into a social services center that helps people with disabilities. Two people armed with assault rifles and handguns were later killed in a gunbattle.

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Motivation

Public Safety

Ethical Considerations

Limitation of traditional methods

Technological Advancements

Rapid Response

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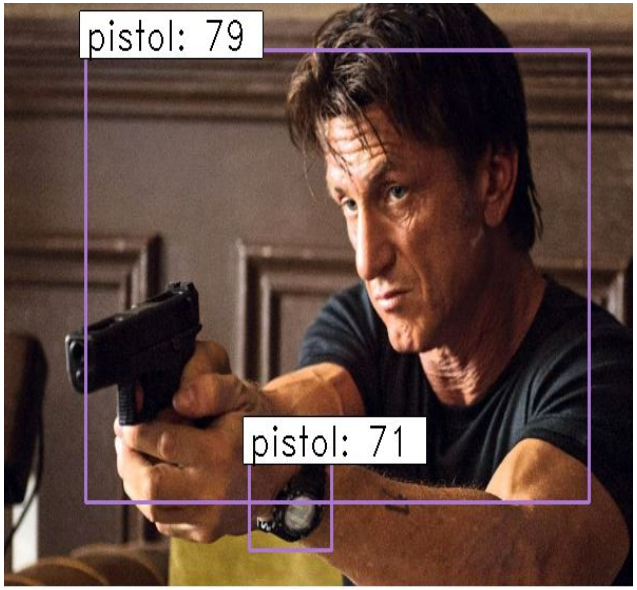
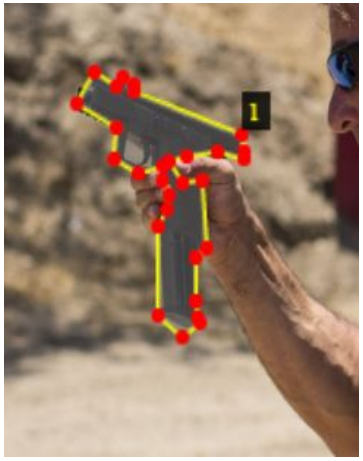
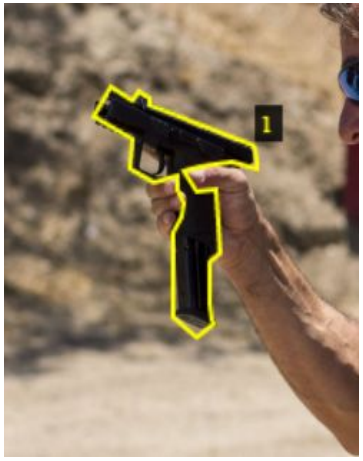
Innovation idea of the project

Our project's innovative idea lies in

- The application of deep learning techniques, specifically convolutional neural networks (CNNs), to detect weapons from images and video feeds.
- By training the system on a large dataset of images containing various types of weapons, we aim to develop a robust and accurate weapon detection algorithm.
- This technology has the potential to revolutionize security systems and offer a proactive approach to threat detection.







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Purpose of the project

The primary purpose of our project is to create a weapon detection system that can be deployed in various settings, including public transportation, government buildings, schools, and crowded public events. The system will serve the following purposes:

- Enhance public safety by detecting weapons in real-time.
- Provide an additional layer of security for law enforcement agencies.
- Reduce response time in emergency situations.
- Act as a deterrent to potential threats by increasing the risk of detection.

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Scope of the project

The scope of our project encompasses several key aspects:

- Deep Learning Model Development: Design and Train a deep learning model using a substantial dataset of weapon images to ensure accurate detection.
- Integration with Surveillance Systems: Our system will be integrated with existing surveillance cameras and video feeds, enabling real-time monitoring.
- Alert Mechanism: The system will be capable of triggering alerts, notifying security personnel or authorities immediately upon weapon detection.
- Scalability: The project is designed to be scalable, allowing for implementation in various environments and the addition of new features and improvements.

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Thank You!