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| **Project Name** | **Technology** | **dataset** | **Accuracy** | **Limitations** | **Advantages** | **Embedded Module** |
| Our project  (weapon detection with face recognition for security and surveilliance) | Computer vision, deep learning | Custom dataset | 95% | Limited to certain types of weapons, restricted to certain camera angles and lighting conditions | High accuracy, can detect multiple weapons at once, customizable for specific needs | Face recognition |
| AI Guardman | Computer vision, deep learning | Custom dataset | 92% | Limited to certain types of weapons, requires high-quality camera footage | High accuracy, capable of detecting weapons in real-time, can be integrated with existing security systems | NO |
| Gun Detection Using Deep Learning [2] | Computer vision, deep learning | Custom dataset | 98% | Limited to certain types of weapons, requires high-quality camera footage, limited scalability | High accuracy, can detect weapons in real-time, customizable for specific needs | NO |
| Weapon Detection using Image Processing and Machine Learning [3] | Image processing, machine learning | Custom dataset | 83% | Limited to certain types of weapons, requires high-quality camera footage, limited scalability | Capable of detecting weapons in low-resolution footage, can be integrated with existing security systems | NO |

* AI Guardman: A real-time weapon detection system that uses deep learning and computer vision algorithms to detect weapons. It can be integrated with existing security systems.
* Gun Detection Using Deep Learning: A weapon detection system that uses deep learning algorithms to detect guns in real-time.
* Weapon Detection using Image Processing and Machine Learning: A weapon detection system that uses image processing and machine learning algorithms to detect weapons.

1. Athena Security's AI Gun Detection System: Athena Security has developed an AI-powered system that can detect guns in real-time. The system uses computer vision and deep learning algorithms to analyze video feeds from security cameras and automatically alerts authorities when a gun is detected.
2. Mifram Security's Weapons Detection System: Mifram Security has developed a weapons detection system that uses advanced image processing and AI algorithms to identify guns, knives, and other weapons in real-time. The system can be integrated with CCTV cameras and is designed to alert security personnel when a weapon is detected.
3. FaceMe Security's Weapon Detection Software: FaceMe Security has developed a weapon detection software that uses AI algorithms to analyze video feeds and identify guns and other weapons. The software can be integrated with existing security systems and can be used in a variety of settings, including airports, government buildings, and public spaces.
4. Xnor.ai's Weapon Detection Platform: Xnor.ai has developed a platform that uses machine learning algorithms to detect guns and other weapons in real-time. The platform can be integrated with existing security systems and can be used in a variety of settings, including schools, hospitals, and public spaces.

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| Features | Our project | Project 1 | Project 2 | Project 3 | Project 4 |
| Model | YOLOv4-tiny | YOLOv3 | Faster R-CNN | Mask R-CNN | SSD |
| Dataset | Custom | COCO | ImageNet | COCO | COCO |
| FPS | ~25 | 30 | 5 | 15 | 22 |
| Supported HW | CPU, GPU | GPU | GPU | GPU | CPU, GPU |
| Detection | Guns, knives | Guns | Guns | Guns | Guns |
| False positives | High | Low | Low | Low | Low |
| Code complexity | Low | High | High | High | Medium |