The project requires expertise in computer vision, machine learning, and software development. Large datasets of labeled video footage are needed to train and test the object detection and motion tracking algorithms. Powerful hardware is also required to process the video feed in real-time.

The smart surveillance system has several potential benefits, such as reducing false alarms and improving the accuracy of surveillance systems. It can also enable security personnel to monitor and track people of interest more effectively.

The project will involve conducting a system requirement analysis, system design, hardware and software requirements, and limitations of the smart surveillance system. Additionally, the project will require the development of a prototype smart surveillance system that can be demonstrated using sample video footage. The final outcome of this project is a functional smart surveillance system that can be integrated with existing surveillance systems, providing advanced features for real-time monitoring and tracking of people and objects.

1.2 PROJECT SCOPE:

The smart surveillance system developed in this project has a wide range of potential application areas, including:

Security and Surveillance: The system can be used to improve the effectiveness of security and surveillance operations in various locations, such as airports, malls, stadiums, and public transportation systems.

Traffic Monitoring: The system can be used to monitor traffic flow and detect any accidents or incidents that may occur on highways, streets, and other transportation networks.