# Image Processing Based Proposed Drone for Detecting and Controlling Street  Crimes

# ABSTRACT

Drone technology is being used for military, agriculture, aerial photography, surveillance, remote sensing and many more purposes. In this paper, drone plane is proposed for monitoring and targeting the street crime criminals based on real time image processing techniques. Operations of proposed plane controlled with two processing units, 1st processing unit is for implementation of real time image processing techniques and 2nd processing unit will handle the rest of controlling, monitoring and targeting operations. Drone plane will monitor circular area of 5 kilometers and it will automatically perform all operations and can be controlled by operator. Shape detection algorithms have been tested to find accuracy in target detection and analysis the processing time before implementing in such environment and results provide optimal accuracy in matching weapons type with name and shape in predefined database.

# introduction

- There are many innovations were made with the combination of computer science and engineering fields such as: robots, auto driving vehicles and home appliances. The solutions and products are made by computers being used in every field to support workers and reduce the burden of human.

- 1Due to growing poverty and population rate 1.12% per year (the average increase is eighty-three million per year), crime rate is also increasing. Most of the crimes take place where security and police cannot access rapidly such as; street crimes and crimes under complex environment (e.g. crowded area). This is major issue in big cities because subjects of crime scene are vanished within short time. Police patrolling, CCTV (Closed-circuit Television) and video camera (video surveillance area) are used to detect the crime scene subjects. After detection it is very difficult to catch them to stop street crimes and many streets are too narrow to pass the vehicle.

# EXISTING SYSTEM

- Growing number of securities and police officers is not efficient solution to overcome this problem because the people who are not involved in criminal activities will not feel free for their domestic and social activities. Therefore, this is leading reason to implement drones for security purposes and by growing number of drones will not affect people's daily life and none of the criminals would think about crime.

- A numerous study has been completed for concealed weapons detection (CWD) by using X-ray images and millimeter-wave based images [1, 2]. In CWD shape descriptors and shape features have been commonly used to detect weapons under cloths though image enhancement is vital for X-ray and millimeter-wave images. This CWD has been implemented in many applications such as airport luggage checking systems and sensitive places.

# PROPOSED SYSTEM

- In this paper, drone plane is proposed for monitoring and targeting the street crime criminals based on real time image processing techniques. Operations of proposed plane controlled with two processing units, 1st processing unit is for implementation of real time image processing techniques and 2nd processing unit will handle the rest of controlling, monitoring and targeting operations.

- Drone plane will monitor circular area of 5 kilometers and it will automatically perform all operations and can be controlled by operator. Shape detection algorithms have been tested to find accuracy in target detection and analysis.

# HARDWARE REQUIREMENTS

- Processor :Intel Pentium IV 1GHz

- RAM :256MB (Min)

- Hard Drive :5GB free space

- Monitor :1024 * 768, High Color inch

- Mouse :Scroll Mouse(Logitech)

- Keyboard :104 keys

# SOFTWARE REQUIREMETS

**Software Requirements :**

- OS                    :            Windows XP/7/8

- Front End            :            Visual Studio 2010/netbeans 7.1

- Back End            :            SQL Server 2005/heidisql

- Browser            :            Any Web Browser

# CONCLUSION

In this paper we proposed real time decision and targeting drone plane based on feature extraction and classification techniques. The design of proposed drone plane is based on two computational units for image processing and controlling operations. Bag of features approach was tested for weapon recognition with predefined database which performance is optimal and HOG is implemented for weapon detection and SVM is used for classification.

# REFERENCES

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