# IMAGE PROCESSING ROUTINES FOR

# AN AUTOMATED SECURITY  SYSTEM

A PROJECT REPORT PRESENTED BY

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Security cameras are common tools in many present day security systems. As cameras become cheaper and security needs become greater, visual surveillance will become central to many applications. By combining digital computer with the knowledge of digital image processing techniques, completely automated security systems can be designed.

Images acquired through a web camera and, a digital computer was used for the software developed. Since the entire project is a process of image subtraction, image comparison and image enhancement, particular algorithms had to be formulated for each operation. These algorithms were implemented using Visual Basic programs. Since Visual Basic provides digital image handling facilities as well as flexible program code writing facilities, this programming language was selected for the development of this system.

The accuracy of the system was dependant on the intensity and brightness of the scene. The algorithms provided satisfactory results for images with good brightness and contrast. Since the whole system was dependant on the images acquired through the camera, the system with a high-resolution camera is expected to give better results than the system with a low-resolution camera. Final implementation of the complete system may require a faster computer interconnected to a web camera that provides a real time video stream.