Traffic in Vietnam in general and in Hanoi in particular nowadays has been raising some thorny issues accompanied by their negative impacts. A few representative examples are the lack of awareness in abiding by traffic laws of traffic participants having provoked more and more terrible accidents or congestion occurring frequently. As such, to effectively solve these problems, applying Closed-circuit Television (CCTV) for the public transportation surveillance system would be very necessary. This system not only helps people improve self-discipline in traffic but also assist the traffic police in performing tasks, tracking and handling violations accurately and transparently. Based on featuring most of the vehicles in traffic in Hanoi is the motorbike, this thesis has concentrated on researching and building a vehicle surveillance system by the image / video on a number of streets in Hanoi and has used a new approach that is recognizing motorbikes through helmets. The system is expected to improve the traffic situation in Hanoi in a more positive direction. This project shows some problems which related to the basic knowledge that being built on contents within. The author used tools called “OpenCV” to apply Haar-like features that ran on Java environment and AdaBoost (Adaptive Boost) algorithms to speed up the detection and recognition processing on all perspectives and types of vehicles. Results have got a feature called “real-time effects” in detection and recognition. This is importance for modifying traffics, controlling lanes, extracting information of vehicles