

## ABSTRACT

Most parking systems in Indonesia still use a fragile security system, one of which is by recording the vehicle's police number into a computer which is then printed as proof when the driver wants to leave the parking lava. But in terms of security is still somewhat vulnerable because when the paper is lost then the vehicle owner only needs to pay the applicable fines and this can be exploited by the thief or people who are not responsible for deceiving the parking security system by paying a fine. With the development of increasingly sophisticated technology that can be utilized for data processing and manipulation.

In this Final Project a smart parking system will be designed in the ticketing and security section. Ticketing in question is a change from a paper ticket to paperless based on image processing namely the face of the driver who will replace the ticket, because this face data will be stored in a database as well as a security system for vehicles entering and leaving the parking lot. The data taken is the driver's face that has been processed into digital images through image processing. With the Face Recognition process if there is no compatibility between the face and the data at the time of exit, the gate will remain closed as a security system

With the creation of a parking system based on image processing is expected to help improve the existing security system in parking lots and can reduce the occurrence of motor vehicle theft cases in public places, one of which is parking lots.

**Keywords :** *Matlab, image processing, face recognition, pengolahan citra*