

Automatic Malaysian Vehicle Plate Number Identification (Auto-MAVIN)

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Abstract—A license plate number is a plate created by metal or plastic that is attached to any vehicle on the road for identification purposes. It is used by the Police Force to prevent uninsured drivers, as well as auto thefts. However, retrieving and identifying the license plate area in the whole traffic image can be quite challenging due to many intrinsic factors. Additionally, it is difficult for the authority to identify a missing car and expiry road tax on the road manually which makes their task harder. To solve these issues, an automatic system that can identify Malaysian license plate numbers is getting attention. Thus, an automatic Malaysian vehicle plate number identification (Auto-MAVIN) system that identifies a Malaysian license plate number is developed. The Deep Learning approach is used for the system design and development model. The distance limit of character recognition was also being tested where the limit distance is 4.7 meters. The reliability test conducted on plate number detection and character recognition returned 98% and 84% of accuracy respectively, which signifies the effectiveness of the system. The Auto-MAVIN is expected to facilitate in reducing any kind of different traffic violations such as tracking and identifying the unauthorized vehicles based on the automated number plate recognition technology. In the future, the system is suggested to add some extra features such as trigger the current location of plate number that has an issue using Global Positioning System (GPS) to warn other nearby Malaysia law enforcement when patrolling on the road.

Keywords—*Automatic Identification, Malaysian Vehicle Plate Number, Deep Learning*