AI option for safer roads, better traffic management

Malaysia can benefit from adopting similar strategies as UAE, S'pore to alleviate congestion, reduce collisions caused by common violations: Expert

BY **HARITH KAMAL**
newsdesk@thesundaily.com

Malaysia plans to enhance digital enforcement efforts by leveraging AI technology to detect traffic offences, curb high-risk violations and reduce collisions. – ***MASRY CHE ANI/THESUN***

PETALING JAYA: Malaysia's plan to incorporate artificial intelligence (AI) into traffic enforcement marks a major step towards safer roads and more efficient management of violations, say experts.

Universiti Malaysia Kelantan Institute for Artificial Intelligence and Big Data director Dr Muhammad Akmal Remli said AI could enhance traffic management, citing the United Arab Emirates (UAE) and Singapore as examples.

"In the UAE, computer vision technology, which is a type of AI that interprets and analyses visual data, is used to detect mobile phone usage, sudden lane changes, seat belt infractions, improper lane discipline and excessive vehicle noise.

"Singapore employs AI to optimise traffic flow. Malaysia can benefit from adopting similar strategies to alleviate congestion and reduce collisions caused by common violations."

He was commenting on a recent statement by Road Transport Department (RTD) director-general Datuk Aedy Fadly Ramli, who announced plans to enhance digital enforcement efforts by leveraging AI technology to detect traffic offences, curb high-risk violations and reduce crashes.

However, Muhammad Akmal cautioned against rushing the implementation and emphasised the importance of gradual rollouts after rigorous testing.

"The authorities should start by testing the system in a specific area before scaling up nationwide. This approach minimises risks and ensures that any issue can be addressed early.

"Technical malfunctions leading to wrongful fines could erode public trust, so the authorities must allow citizens to contest penalties if they believe they were wrongly meted out."

Universiti Teknologi Malaysia Centre for Artificial Intelligence and Robotics researcher Assoc Prof Dr Zool Hilmi Ismail said implementing AI in Malaysia's traffic management system could be challenging, especially in the initial stages.

"Financial constraints can be a significant hurdle, as setting up AI systems is costly. In terms of infrastructure, upgrading current systems to support AI technology might be necessary.

"Addressing these challenges could involve phased investments, collaborations with research institutes and technology firms for expertise, and coordinated support across government agencies to ensure smooth integration."

Universiti Putra Malaysia Road Safety Research Centre head Assoc Prof Dr Law Teik Hua also lent his support to using AI in the traffic management system.

"It has the potential to increase the accuracy and efficiency of traffic law enforcement as AI can identify violations such as speeding and running red lights, and automatically issue fines, reducing human error and bias in enforcement.

"With AI's ability to process large amounts of data in real-time, RTD could save time with precise interventions, especially in high-risk areas where crashes are more likely to occur."

Law also said the implementation must be carried out properly to gain public trust.

"The use of AI technology and increased surveillance raises concerns about data privacy. RTD must ensure robust data protection measures and transparency about how information is stored and used. Public trust depends on such assurances.

"AI systems must also be seamlessly integrated with existing road enforcement systems, such as traffic cameras and databases."

Law said this would ensure that enforcement is effective and data can be cross-checked across different platforms, making the monitoring process more cohesive and comprehensive.

He added that successful AI implementation would depend on collaboration with local governments, police and other relevant authorities.

"Coordination is essential to ensure that AI-driven enforcement is integrated with broader traffic management and public safety efforts. Joint campaigns with other stakeholders could also amplify the reach and impact of public awareness initiatives.

"If properly executed, the use of AI could reshape road safety in Malaysia."