tapway

A CASE STUDY:

AUTOMATE TOLL PAYMENT & REDUCE LOSSES WITH AI VISION
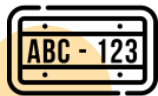
OBJECTIVES

Known to be the largest in Malaysia, PLUS Malaysia Berhad is using Tapway VehicleTrack to help automate payment for multi-class lanes, where manual labor is previously required to classify each vehicle to assign the appropriate toll rate. In addition, there are cases of fraud throughout the expressway which impacts toll revenue.

SOLUTION

Tapway VehicleTrack solution is deployed on their highway to count and classify vehicles with the following details:

Vehicle class   Licence plate   Vehicle color   Brand logo

Tapway is using AWS IoT Greengrass to seamlessly manage all the edge servers while ensuring they have the capabilities of the cloud without the need for manual intervention. In addition, Tapway is also using AWS SageMaker for model training. AWS SageMaker helps to monitor training runs, troubleshooting logs and spawning parallel hyperparameter tuning jobs.

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RESULTS

With **>99.4%** ANPR character accuracy and **>97.6%** vehicle classification accuracy for toll payment, Tapway VehicleTrack has enabled PLUS Malaysia to:

Automate toll payment rate according to vehicle class group

Detect fraud cases by matching card ID with license plate to determine the same card usage for both entry and exit lanes

With Tapway VehicleTrack in place, PLUS can now automate payment, reduce labor, reduce losses due to fraud and track movement of vehicles on their premises.

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