

CI Driving Assistance Smartphone Application

*CI : Cooperative Intelligence



Aiming to provide a “CI Drive-Assistive Application,” affordable and compact traffic alert system, to reduce traffic accidents involving motorcycles.

Technology Details

- Images from a USB camera are input into a smartphone, which uses lightweight CI to predict risks from motorcycles and automobiles approaching a vehicle from the rear, front, and sides.
- Vanishing point calculation and lane estimation using vehicle detection are computationally efficient and serverless, enabling accurate, lightweight risk estimation.
- Through collaboration with public agencies in Indonesia, the application is being tested on official vehicles and official motorcycles. Verification of safety and functionality is on-going, along with promotional activity.
- The screen of the smartphone changes color in a wavy pattern for identifiable and intuitive risk notification, even in a noisy environment.

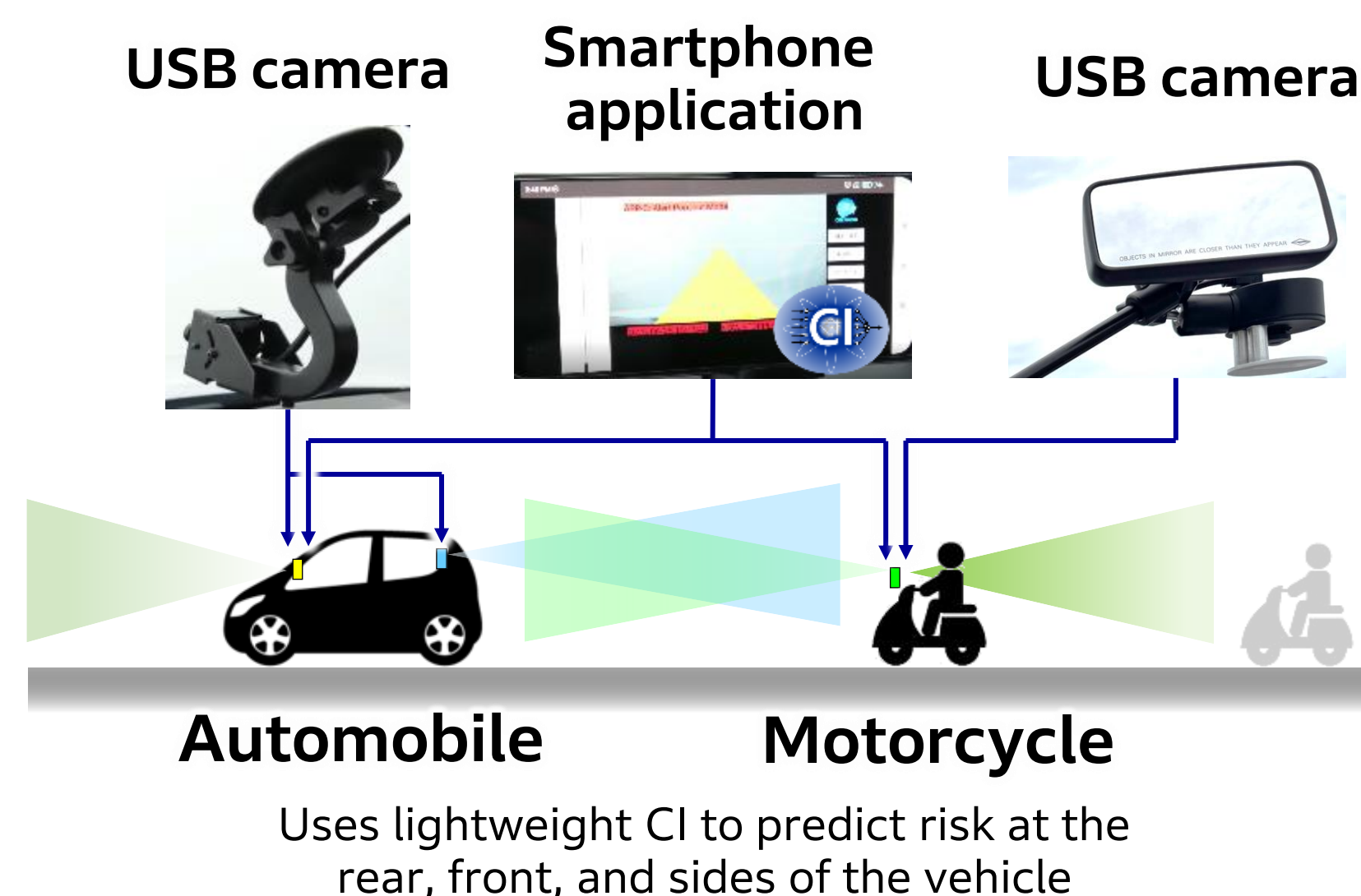
Technology Characteristics

- Affordable safety support system that can be used with just a smartphone application
- Collaborating with public agencies in Indonesia on safety verification, functionality verification, and promotion

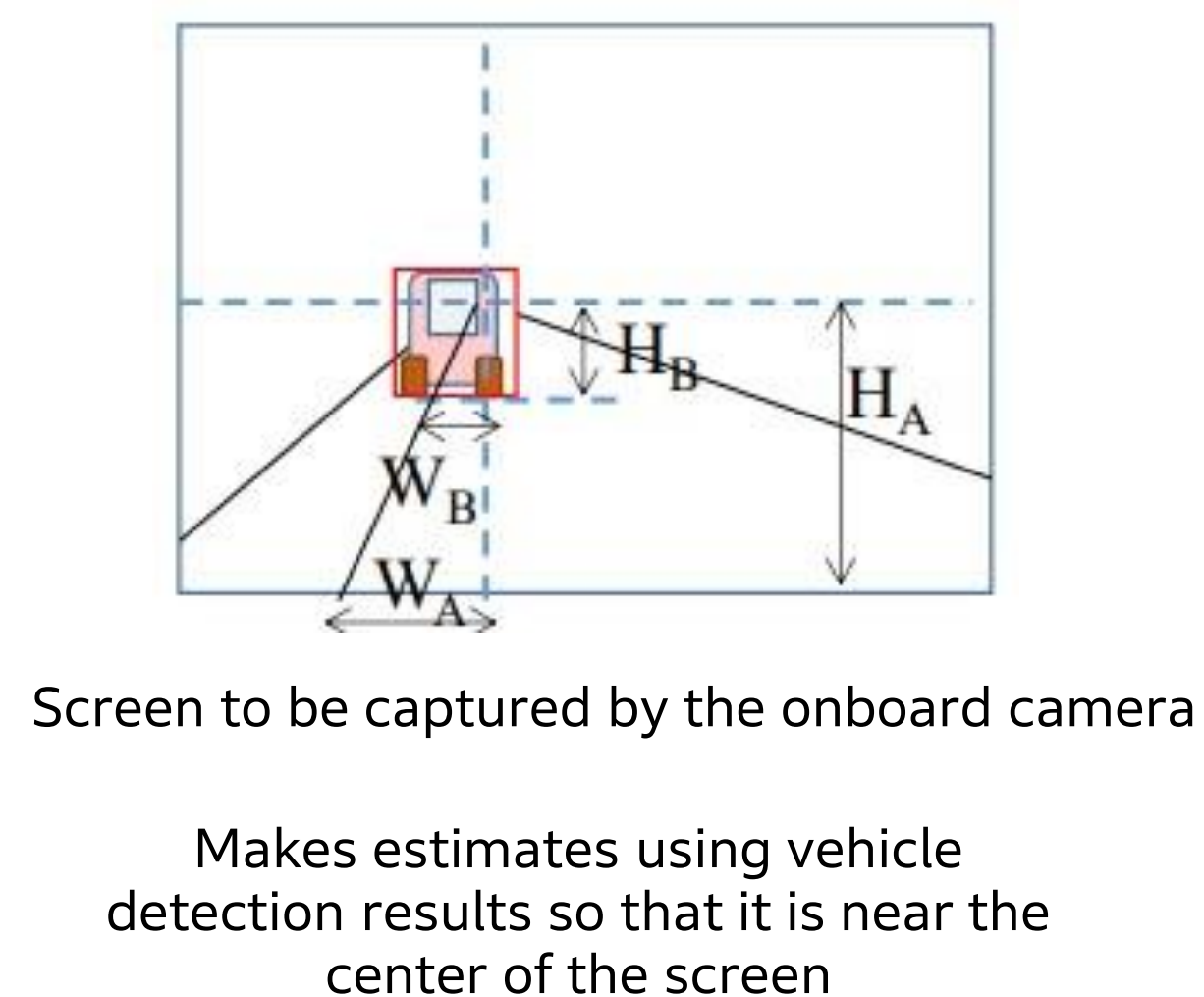
References:

- Mobile Alert System Using Lane Detection Based on Vehicle Clustering, *2024 IEEE 12th International Conference on Intelligent Systems (Best Paper Award)*
- Detection of Encroaching Vehicles based on Combination of Deep-Learning-Based Object Detection and Heuristics, *2025 IEEE System Man Cybernetics*

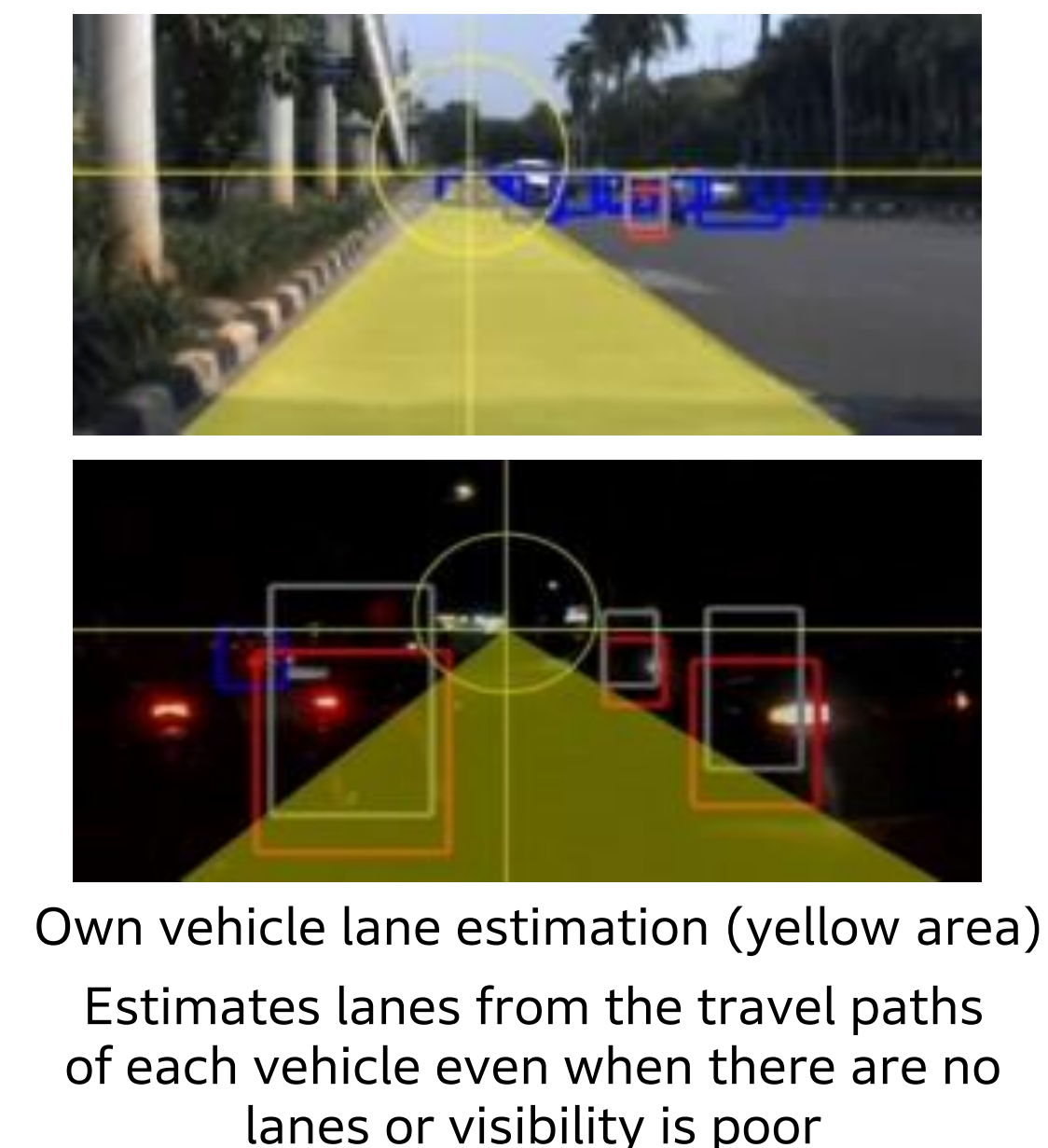
Affordable System Compatible with Motorcycles and Automobiles



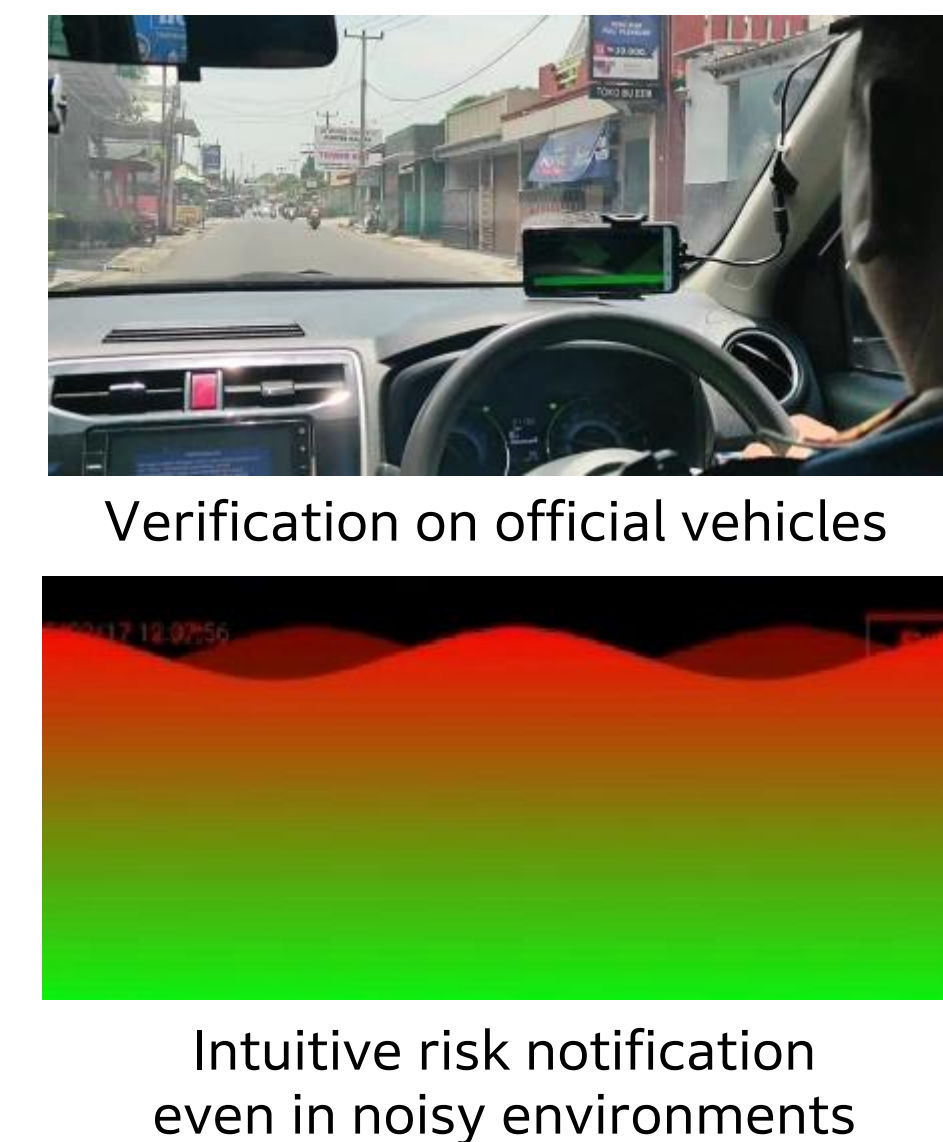
Server-less Vanishing Point Calculation



Lane Detection Using Vehicle Clustering



Collaboration with Indonesian public agencies



Aiming to enable everyone to move freely and safely by using the “CI Driving Assistance Smartphone Application”.