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Jeremy Chan

**Distributed Road Traffic Speed Monitoring**

Dr. Ed Stott

Speed cameras have been shown to slow traffic down and prevent accidents. Specifically, average speed cameras are more effective than fixed position cameras as they prevent speeding after the motorist has passed the camera. However, around 84% [1] of the UK’s average speed cameras are placed on busy trunk routes as it is not economically feasible to place them in rural areas. Moreover, the design of traditional speed cameras means their widespread deployment on residential roads would be detrimental to the streetscape.

This project therefore enables the use of average speed cameras in any area. It is a low-cost, distributed vehicle speed monitoring system that communities can install themselves within private property next to a street. The system enables civilians to use their own personal cameras to detect and share license plate information by leveraging local binary pattern and optical character recognition computer vision algorithms. Plates, along with time and location data, are directly broadcasted to other peers in the network without the need for a central server. Violations are detected based on the average speed method using public mapping data, and users notified if an infraction occurs. Simulations, along with real world testing, show positive results under multiple lighting and camera conditions.