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# Applying Theory of Self-Efficacy in Intelligent Transportation Systems by Potential Usage of Vehicle as a Sensor

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**Abstract :** The objective of the study is to formulate a self-regulation model that shall enhance the usage of Intelligent Transportation Systems by understanding the theory of self-efficacy. The core logic of the self-regulation model shall monitor driver's behavior based on the situations related to the various sources of Self Efficacy like enactive mastery, vicarious experience, verbal persuasion and physiological arousal in addition to the vehicle data. For this study, four different vehicle data, speed, drowsiness, diagnostic data and surround camera views are considered. This data shall be given to the self-regulation model for evaluation. The oddness, which is the output of self-regulation model, shall feed to Intelligent Transportation Systems where appropriate actions are being taken. These actions include warning to the user as well as the input to the related transportation systems. It is also observed that the usage of vehicle as a sensor reduces the wastage of resource utilization or duplication. Altogether, this approach enhances the intelligence of the transportation systems especially in safety, productivity and environmental performance.

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