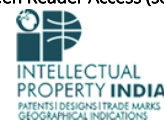


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Patent Search

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Abstract:

Machine learning technique is employed in this proposed system for analysing and determining a driver's attitude and performance while driving a vehicle. A raw sequential data from a set of vehicular sensors undergoes filtration to remove unwanted noise before being processed into a sequence of driving event elements. A pattern-recognition algorithm then deduces a succession of higher-level driving moves from the series of driving incidents. Lane changes, passing, turning and braking are all driving manoeuvres. Parameters derived from sensor information have been used to quantify driving occurrences and manoeuvres. The manoeuvres parameters and their timing can be examined to establish skill and attitude that can be used to assess the driver's capabilities and safety records. The data is transformed into significant driving elements, allowing more precise, relevant research and assessment to be achievable with traditional empirical threshold-based analysis. By giving driver notifications, one or even more methodologies are offered. A customer device module acquires driving behaviour data (e.g., weather conditions, vehicle speed, acceleration/deceleration patterns, braking patterns, etc.) and user-specified data (the passenger count) of a driver riding a vehicle. A driver alert service may receive driving behavioural data and user-specified information from the user device unit. Depending on the driving behavioural data and the user given data, the driver alert service can keep a driver account for the user. Depending on the driver profiles, the driver alert service may build a driver alert and send the alert to those other drivers available within a certain distance.

Complete Specification

linked to acceleration followed by deceleration during manoeuvre).

Furthermore, for the purpose of producing and awarding an aggregate attitude score for the present driver, every manoeuvre has allocated a weighting driving risky factor. A driving anomaly analyser examines the output driving moves for irregularities in the driver's operating profile after they have been processed via the driving manoeuvre analyser. A driver's account or group of profiles are stored in a database and compared to the driver's present behaviour. A profile for different manoeuvres could be kept thus whatever the present driving manoeuvre was, it could be compared to a previously stored manoeuvre. The driving discrepancies are submitted to an emergency warning for follow-up verification or investigation whether there's a significant disagreement among the present driving manoeuvres and then the recorded accounts for the driver are utilized as a standard. A large inconsistency, or discrepancy as previously stated, may signify a dangerous situation. The driving manoeuvre analyser transmits driving manoeuvres sequence to an analyser, that analyses and evaluates the driving behaviours and produces an alarm/report/notification. As shown, these resultant alarm/report/notifications might include data on a driving condition as well as a driving scenario analysis report.

Thus, via statistical evaluation, the driving situation summary report, certain general analyses and assessments, including a driving skill review statement as well as a driving attitude review statement, can be generated. It should be observed that there has been numerous possible descriptive terminology for both driving events as well as driving manoeuvres; as a result, it should be recognized that the specific descriptive terms really aren't exhaustive, but other terms may be used. The Passing driving move is termed after the typical phrase for the manoeuvre, whereas bypassing and overtaking can also be used to denote this. As a result, any phrase that reasonably represents roughly the identical sequence of events and physical occurrence as a term employed herein are considered to be equal.

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