

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202311061814 A

(19) INDIA

(22) Date of filing of Application :14/09/2023

(43) Publication Date : 15/12/2023

(54) Title of the invention : MODEL-DRIVEN ANALYSIS OF ROAD CURVATURE'S IMPACT

(51) International classification :G01C0021340000, H04W0008080000, G06Q0010040000, B60R0011000000, G06Q0030020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The innovative system (100) presented herein revolutionizes route planning by assessing road curvature's impact on travel time and comfort. This dynamic framework consists of a data collection module (102) empowered to gather road geometry, vehicle dynamics, and road surface data. The model development module (104), housing a processor, ingeniously constructs a predictive model that anticipates travel time and comfort based on road curvature, skillfully harnessing the collected data. Through seamless integration, the route optimization module (106) excels at identifying optimal routes tailored to distinct travel objectives. Notably, the data collection module incorporates vehicle-installed sensors, while the model development module capitalizes on computer-readable instructions stored in memory, synergistically culminating in a revolutionary system that epitomizes precision, efficiency, and personalized route optimization.

No. of Pages : 22 No. of Claims : 10