Literature Survey

Team No : 11

Team ID :PNT2022TMID08260

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S. No	TITLE	PROPOSED WORK	ALGORITHM	TECHNOLOGY	ADVANTAGES/ DISADVANTAGES
1	Methodology of repair cost estimation in vehicles based on the deformation measurements in real world accidents. **Author - Francisco Javier Paez** **Year- 2016**	The main objective of this study is to analyses the relationship between the reconstruction variables based on the deformation measures in real world accidents.	• Audaplus	• Artificial intelligence. • Data Science.	A retrospective methodology to estimate easily repair costs of vehicles involved in road accidents with the front zone involved.
2	Accuracy of self-reported data for estimating crash severity . **Author - Michael R Elliott's** **Kristy B Arbogast** **Year - 2003**	This "self-report" delta-V was computed from the estimated traveling speeds and direction of impact obtained from telephone interviews with drivers.	• PCPS – Partners for Child Passenger Safety	• Artificial intelligence. • Deep learning.	In general, this self-report delta-V estimate, although not a perfect proxy, provides a better prediction of crash severity than either estimated traveling speed or posted speed limit.

S. NO	TITLE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	ADVANTAGES/ DISADVANTAGES
3	A revised damage analysis procedure for the CRASH computer program. **Author - Raymond R. McHenry's** **Brian Mchenry** **Year - 1986**	The proposed calculation procedure has the potential capability of improving the delta-V accuracy in low-speed collisions and segregating stiffness and restitution properties.	• CRASH 3 • CRASH 4	• Deep Learning. • Data Science.	Improving the delta-V accuracy in low-speed collisions and segregating stiffness and restitution properties.
4	Crash pulse recorder (CPR) – Validation in full scale crash test. **Author - Anders Kullgren** **Anders Lie** **Year - 1995**	This presentation gives results of tests of a low cost device for measuring the crash pulse for a car involved in an accident, concerning systematic and random error.	• CPR – Crash Pulse Recorder	• Deep Learning • Data Science	The accident severity measurements made by CPRs, it is possible to conduct large field studies.

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5	Crash analysis and reconstruction. **Author - Dario Vangi** **Year - 2020**	The procedures to apply impulsive models, based on the conservation of momentum and angular momentum, and to apply models, based on the relationships between force and deformation of vehicles, are analyzed.	• Simulation Model of Automobile Collisions-SMAC • Calspan Reconstruction of Accident Speeds on the Highway-CRASH	• Deep Learning. • Data Science.	The models can be used for manual reconstruction and acts as the basis of the software for the reconstruction of traffic accident dynamics.
6	Differential rollover risk in vehicle-to-traffic barrier collision. **Author - Douglas J Gabauer** **Hampton Gabler** **Year - 2009**	This study investigated rollover rates between sport utility vehicles (SUVs), pickup trucks, and cars in vehicle-traffic barrier crashes and has examined.	• Longitudinal Barrier special study(LBBS) • National automatic sampling system(NASS) • Crashworthiness data system(CDS)	• Data Science. • Artificial Intelligence.	Although pickups were found to have an increased risk of rollover compared to cars, the risk was not as pronounced as that found for SUVs.

THANK YOU