Date	03 September 2022
Team ID	PNT2022TMID00660
Project Name	Project - Machine Learning based Vehicle Performance Analyzer

Literature Survey:

Sl. No.	Authors	Title of Paper	Name of the Journal	Methodology Used	Findings
01.	R. Prytz, S. Nowaczyk, S. Byttner.	Towards relation discovery for diagnostics.	Association for Computing Machinery.	Unsupervised Learning	The interesting relationships are found in a two-step procedure. In the first step all valid models, defined by a MSE threshold, are found. In the second step the model parameters are studies over time to determine which are Significant. The method is evaluated on a dataset from a controlled fault injection experiment with four different faults.
02.	T. Rögnvaldsson, S. Byttner, R. Prytz, S Nowaczyk.	Wisdom of Crowds for Self-organized Intelligent Monitoring of Vehicle Fleets.	IEEE Transactions on Knowledge and Data Engineering (TKDE).	COSMO algorithm	The algorithm is demonstrated to be useful to detect failures related the to cooling fan and heat load of the engine. Erroneous fan control and coolant leaks were detected at several occasions. Eleven cases of deviations related to the coolant fan gauge were found using histograms as on-board models.
03.	R. Prytz, S. Nowaczyk, T. Rögnvaldsson, S. Byttner.	Analysis of Truck Compressor Failures Based on Logged Vehicle Data.	In Proceedings of the 9th International Conference on Data Mining.	Classification Algorithm	Classifiers learn individual truck behaviour in contrast to signs of wear. It is found that using these off board data sources is viable as input data for predicting vehicle maintenance, albeit it
04.	R. Prytz, S Nowaczyk, T Rögnvaldsson, S Byttner.	Predicting the Need for Vehicle Compressor Repairs Using Maintenance Records and Logged Vehicle Data.	Engineering Applications of Artificial Intelligence.	Supervised Machine Learning	The method is evaluated on the air compressor of a Volvo FH13 vehicles. The method evaluates a vehicle just prior to an already scheduled workshop visit. The vehicle is flagged as Faulty in case the vehicle's air compressor is predicted to fail before the next planned workshop visit. This results in an extra air compressor check-up at the upcoming workshop visit. The method was successful in achieving an economical benefit, albeit at the cost of a rather high level of false repair claims.

05.	Jian Zhang, Mingjun Li, Liping Wang.	Evaluation of Vehicle Performance Based on Set Pair Analysis.	Joint International Advanced Engineering and Technology Research Conference.	ReliefF algorithm in Machine Learning	The accuracy improvements of the PHEV model that is achieved by implementing the VTC. The validity of the VTC is addressed by examining the PHEV model to mimic the characteristics of internal combustion engine, motor, and generator behaviours observed through the benchmark test. Sufficient simulations and hardware-in-loop test are employed to demonstrate the capability of the novel VTC-based model validation method in practical applications.
06.	Zhang, Yuanjian & Chen, Zheng & Li, Guang & Liu, Yonggang & Chen, Haibo & Cunningham, Geoffrey & Early, Juliana.	Machine Learning-Based Vehicle Model Construction and Validation—Toward Optimal Control Strategy Development for Plug-In Hybrid Electric Vehicles.	IEEE Transactions on Transportation Electrification.	Machine Learning	Vehicular communication systems can select appropriate channel models and transmission mode by correctly identifying the current scenarios to maintain an effective and reliable operating state. The results show that the identification accuracies are all above 98 % in four typical scenarios of urban areas, highways, tunnels, and vehicle obstructions, which indicates that the model shows good performance in scenario identification for intelligent vehicular communications.