**Literature Review: Simultaneous Battery Deterioration forecasting and anomaly detection in EVs using LSTM Neural Networks & Auto-encoders.**

Background: With the evolution of technology, the emphasis has turned to reconstruct the functions of the human body so that the repercussions of extreme stress on it are mitigated by delegating a fraction of its responsibilities to machines, signifying the replication of the human brain. Artificial neural networks have proven to be effective to a certain degree by employing similar, but not exact, operations of the human brain, the natural neural network. When combined efficiently with the memory of a machine, neural networks have the potential to make logically sound decisions based on series of numeric data, using Long-Short Term Memory neural networks (LSTM). LSTMs evoke the ability of retaining context relevant information while making decisions over temporal data fluctuations in NNs. Moreover, NNs have also been employed through Auto-Encoder architectures to recreate data by using important features that cause error in identical reconstruction of data, where the model defines normal behaviour through unsupervised learning and conducts reconstruction error analysis by flagging deviations from normal. Previously these architectures of artificial neural networks have been employed to solve a plethora of real-life problems in various disciplines, the purpose of this research is to test their effectiveness in learning the behaviours of batteries in electric vehicles (EVs).