Srinivas University
Mangalore - India

Machine Learning & Deep Learning
Research Centre

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1. Purpose of MLRC:

The study of machine learning is to find and discover patterns in the data and then make predictions based on complex patterns to respond to real time questions, detect and analyze trends and help to solve problems.

2. Objective of MLRC:

To prepare a model on historical, labelled information (i.e., information for which the result is known) to predict the value of some quantity on the basis of a new data item for which the target value or classification is unknown.

1. Description on Proposed Research:

Traffic Flow Prediction
The traffic flow prediction has wide application in the city transportation and area management. In big cities, it is very difficult to manage the traffic. The Traffic flow prediction is a time series problem to estimate the flow count at a future time based on the data collected over previous periods from one or more observation locations. This research is about predicting the traffic flow in an urban city using machine learning tools. By training Machine learning tools with some historical and time series data, the machine automatically learn how to predict the traffic in an urban area.

2. Expected Outcome:

Traffic Flow Prediction
The research is targeted to train the system to learn to predict the traffic by using a traffic flow prediction algorithm. The system can suggest to the user according to their search. The public can benefit by using this system because, the users can know current traffic flow and current weather conditions of the roads, thereby reducing the possibility of road accidents and enhancing road safety.

3. List of the Team Members:
1. Mrs. Sigma Sathyan (Research Scholar)
2. Dr. Jagadeesha S N

List of Working Papers:

Traffic Flow Prediction
1. Lv, Y., Duan, Y., Kang, W., Li, Z., & Wang, F. Y. (2014). Traffic flow prediction with big data: a deep learning approach. *IEEE Transactions on Intelligent Transportation Systems*, *16*(2), 865-873.
2. Duan, Z., Yang, Y., Zhang, K., Ni, Y., & Bajgain, S. (2018). Improved deep hybrid networks for urban traffic flow prediction using trajectory data. *Ieee Access*, *6*, 31820-31827.
3. Xu, Y., Chen, H., Kong, Q. J., Zhai, X., & Liu, Y. (2016). Urban traffic flow prediction: a spatio-temporal variable selection-based approach. *Journal of Advanced Transportation*, *50*(4), 489-506.
4. Polson, N. G., & Sokolov, V. O. (2017). Deep learning for short-term traffic flow prediction. *Transportation Research Part C: Emerging Technologies*, *79*, 1-17.

4. List of related Published Papers in Journals, Proceedings, Book Chapters, Magazines by this Group.

1. Sathyan, S., & Jagadeesha, S. N. (2022). Traffic Flow Prediction using Machine Learning Techniques-A Systematic Literature Review. *International Journal of Applied Engineering and Management Letters (IJAEML)*, *6*(1), 210-230.

2. Sathyan, S., & Jagadeesha, S. N. (2021). 100 Years of Growth and Success Story of Nestle India-A Fast Moving Consumer Goods (FMCG) *Industry. International Journal of Case Studies in Business, IT and Education (IJCSBE), 5*(2), 226-238.

Name & Signature of Coordinator with date.

09/07/2022
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