**CSE523 Machine Learning**

**Prof. Mehul Raval**

**Time Series Sales Forecasting using Machine Learning Algorithms**

**Week-1 Progress Report**

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**About the Research Paper**

**The Reference Paper link:** <https://ieeexplore.ieee.org/document/9071463>

This is the reference paper which we decided. It basically has the details of comparison between the accuracies of different machine learning algorithms. The three algorithms which we have decided are:

1. Linear Regression
2. Ridge Regression
3. Auto Regressive Integrated Moving Average

**About the Dataset**

We have selected the dataset which was posted in a sales forecasting Kaggle completion. The link for the dataset is: [https://github.com/BekBrace/Sales-For...](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqbW5wSEVEcUZ4enBrV050Vk5zUUFUc2JTN0twd3xBQ3Jtc0ttUF9nNEZURWxKbHYyd0ktVlNKSUtEMkNpemgxTHN5SDhzRklsTlJreHphZ1phakN5eV9xbDJ6T2NFUVBGOFhmZTJLWjNjbGV5UkVKcDZ5cldHUExNVEI3clpTZDE2UDlSSWpSVFVMZzVVbGt0QnQzNA&q=https%3A%2F%2Fgithub.com%2FBekBrace%2FSales-Forecast-data-csv&v=20fbgWm5M2o)

**Work we did**

In this week we completed the following tasks:

* Finalizing the algorithms which we are going to work with.
* Deciding the dataset.
* The platform on which we will implement – Google Colab.
* Also started gaining more knowledge about the algorithms and had a bird view on the reference paper.
* Here are some resources from which we started researching:
  + <https://www.youtube.com/watch?v=20fbgWm5M2o&t=893s>
  + Other research papers: <https://ieeexplore.ieee.org/abstract/document/9342304>

**Tasks for next week**

For the next week,

* We will try to read the paper in detail to understand the mathematics of the algorithms.
* Import the dataset and pre-process it.