

**School of Engineering and Applied Science**

**BTech ICT Semester VI**

**CSE523 Machine Learning**

**Project Progress Report**

**Week 3**

* **Team:** Binary Beasts
* **Team members:**

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1. **Tasks performed this week:**

* This week, we implemented linear regression model in python for our dataset using built-in libraries so that we would be able to see how much accuracy we are getting.
* We split our dataset into train and test data set as 80% of the data and 20% of the data respectively.
* As we are getting low accuracy for linear regression model, we applied gradient boosting model to ensemble weak linear regression model to achieve higher accuracy.

1. **Outcomes of the tasks performed:**

* As the outcome of the linear regression implementation, we are getting 47% prediction accuracy for the train dataset and 48% prediction accuracy for test dataset.
* For gradient boosting model, accuracy for train data is 93% and for test data is 49%.
* Overfitting problem is present with gradient boosting model.

1. **Tasks to be performed in the upcoming week:**

* In the upcoming week, we will implement for polynomial regression and random forest regression for our dataset and compare their accuracy with this week’s results.