**Team Name - Outliers**

**Solution Sheet**

1. Which model have you used for Total IPL 2020 Runs prediction for each player? Explain your model.

The model that our team used is XGBRegressor, imported from XGBoost. [XGBoost](https://xgboost.ai/)is a decision-tree-based ensemble Machine Learning algorithm that uses a [gradient boosting](https://en.wikipedia.org/wiki/Gradient_boosting) framework. It is a highly optimized version of gradient boosting algorithm and built upon it with additional advantages. The advantages include parallel computing which is parallelization of tree construction by using all our CPU cores, ability to handle missing values automatically, ability to use both L1, L2 type of regularization, ability to handle very large datasets with cache optimization. The model is really very fast and saves a lot of time.

The two reasons to use XGBoost are also the two goals of the project:

1. Execution Speed
2. Model Performance

Through rigorous hyperparameter tuning, we were able to achieve an accuracy of 99.06% on the test data set.