LITERATURE SURVEY

TOPIC: DemandEst - AI powered Food Demand Forecaster

[1] Yoichi Motomura, Baysian network, Technical Report of IEICE, Vol.103, No.285, pp.25-30, 2003.

Bayesian Linear Regression (Bayesian) may be a method of applying Bayesian network to machine learning. The Bayesian network may be a probabilistic model during which conditional dependencies among multiple random variables are expressed employing a graph structure and dependency relationships between random variables are expressed by conditional probabilities [1]

[2] https://en.wikipedia.org/wiki/Random_forest

It is a way which may be used for both classification and regression and deploys multiple decision tress to construct a forest and accumulates all the training results from each tree [2].

[3] https://statisticshowto.com/lasso/regression

In statistics and machine learning, lasso could also be a multivariate analysis method that performs both variable selection and regularization so on reinforce, the prediction accuracy and interpretability of the statistical model it produces. Lasso regression could also be a kind of linear regression that uses shrinkage. Shrinkage is where data values are shrunk towards a central point, a bit like the mean [3]

[4]https://towardsdatascience.com/supportvectormachines-svm-c9ef22815589

SVM may be a popular technique used for classification and builds a hyper plane to extract the data patterns. For SVM model to possess high accuracy, the training data must have top quality and relevant features, otherwise the performance would be very poor and would end in low accuracy [4].

[5]. K Aishwarya, Aishwarya N Rao, Nikita Kumari, Akshit Mishra, Mrs. Rashmi MR; FOOD DEMAND PREDICTION USING MACHINE LEARNING, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056.

linear regression using probability distributions instead of point estimates. The anticipated value of the variable is completed by the very best probability value of distribution of unobserved variables against observed variables[5].

In Linear regression the evaluation metric Root of Mean Squared Logarithmic Error (RMSLE) gave a RMSLE score of 0.634. CatBoost and LightGBM Regressors performed well on the model which gave much reduced RMSLE. With proper hyper-parameter tuning, CatBoost Regressor performed well on the model and gave the lease RMSLE of 0.5237