**Email-Campaign-Effectiveness-Prediction**

|  |
| --- |
| **Team Member’s Name, Email and Contribution:** |
| Name: Ritika Rawat  Email: Ritikarawat220@gmail.com |
| **GitHub Repo & Drive Link:** |
|  |
| **Project Summary:** |
| **PROBLEM STATEMENT**  • Most of the small to medium business owners are making effective use of Gmail-based Email marketing Strategies for offline targeting of converting their prospective customers into leads so that they stay with them in Business.  • The main objective is to create a machine learning model to characterize the mail and track the mail that is ignored; read; acknowledged by the reader.  **SUMMARY**  • The main objective is to create a machine learning model to characterize the mail and track the mail that is ignored; read; acknowledged by the reader.  • In addition to the ML Model prediction, we also analyzed what all features can help us in getting the Email status to be not ignored by the customers.  **APPROACHES INVOLVED**  • Data collection  • Data preparation  • Exploratory data analysis  • Feature Engineering  • Handling Imbalanced dataset  • Working different models and Evaluating model  **CONCLUSION**  • In EDA, we observed that Email\_Campaign\_Type was the most important feature. If your Email\_Campaign\_Type was 1, there is a 90% likelihood of your Email to be read/acknowledged. • It was observed that both Time\_Email\_Sent and Customer\_Location was insignificant in determining the Email\_status. The ratio of the Email\_Status was the same irrespective of the demographic location or the time frame the emails were sent on.  • As the word\_count increases beyond the 600 mark we see that there is a high possibility of that email being ignored. The ideal mark is 400-600. No one is interested in reading long emails!  • For modelling, it was observed that for imbalance handling Oversampling i.e., SMOTE worked way better than under sampling as the latter resulted in a lot of loss of information.  • Based on the metrics, XGBoost Classifier worked the best, giving a train score of 89% and test score of 81% for F1 score. |
| **Reference:**  *Declaration: The references mentioned below are not the direct copy of code but used for learning purpose of various techniques or metrics or ideas that have been adapted in this project after learning and understanding the concepts thoroughly from these mentioned articles.*   * Geeksforgeeks * Analytics vidya * Machine learning |