

## SUMMARY REPORT

X Education has recognized a critical issue - a meager lead conversion rate of 30%. To address this, the company sought to boost this rate significantly to reach an ambitious goal of 80%. This initiative led to the creation of a lead scoring model, aimed at assigning lead scores for effective prioritization of leads and streamlining the sales team's efforts.

The journey began with rigorous data cleaning efforts. Columns with excessive null values were dropped, and various strategies were applied to handle categorical variables with skewed imputations. Numeric categorical data was imputed using the mode, while redundant columns and data outliers were addressed. This cleaning phase also included data mapping for binary categorical values.

Extensive exploratory data analysis revealed an existing data imbalance, with only 38.5% of leads converting. Univariate and bivariate analyses shed light on crucial variables influencing lead conversion, including 'Lead Origin,' 'Current Occupation,' and 'Lead Source.' Notably, the time spent on the website emerged as a key positive factor.

Data preparation was essential for model building. Dummy features for categorical variables were created, and data was divided into training and testing sets. Feature scaling and the removal of highly correlated columns further refined the dataset. The culmination of model building efforts resulted in a stable 'logm4' model with 12 variables, selected after multiple iterations and manual feature reduction.

Model evaluation revealed an optimal cutoff point of 0.345, which, when applied to the model, achieved remarkable accuracy, specificity, and precision around 80%. Lead scores were assigned to the training data based on this threshold, and the final model demonstrated consistent performance across training and test datasets.

Looking forward, the report recommends allocating a higher budget for promoting the 'Welingak Website' and introduces incentives for successful referrals, aiming to encourage more recommendations. The report also advocates for targeted marketing efforts directed at working professionals, considering their high conversion rates and improved financial capacity to afford higher course fees.