

# Lead Score Case Study Summary

## **Problem Statement:**

X Education, an online course provider, aims to enhance its lead conversion rate from 30% to 80%. To achieve this, a predictive lead scoring model is sought to identify and prioritize "Hot Leads" with a higher likelihood of conversion. The model's scores will enable targeted engagement, optimizing the sales team's efforts.

## **Analysis Approach:**

The case study unfolds through distinct phases:

**Data Cleaning:** Handling null values, dropping irrelevant columns, and imputing missing values.

**Exploratory Data Analysis (EDA):** Univariate and bivariate analyses reveal insights such as lead conversion rates, effective lead sources, and correlations between activities and conversion likelihood.

**Data Preparation:** Transforming categorical variables, creating dummy variables, and splitting data into training and test sets.

**Feature Selection:** Utilizing Recursive Feature Elimination (RFE) to narrow down to significant features for model building.

**Model Building and Evaluation:**

A meticulous model building process involves manual feature elimination based on p-values. The final model achieves an accuracy of around 80%, demonstrating good predictive performance on both training and test datasets. ROC curves further support the model's efficacy, with area under the curve values indicating strong predictive capabilities.

## **Recommendations:**

The model's insights lead to actionable recommendations for the sales team:

**Make Calls:** Prioritize leads from "Welingak Websites" and "Reference," working professionals, leads spending more time on the website, and those with the last activity as "SMS Sent."

**Do Not Call:** Avoid calls to leads with the last activity as "Olark Chat Conversation," lead origin "Landing Page Submission," specialization as "Others," and those who opted for "Do not Email."

## **Conclusion:**

The case study successfully addresses X Education's lead conversion challenge through a comprehensive process encompassing data cleaning, exploratory analysis, feature selection, model building, and evaluation. The recommendations provide a clear roadmap for the sales team to focus on leads with the highest potential for conversion, aligning with the company's goal of achieving an 80% lead conversion rate. The approach outlined in this case study combines statistical rigor with practical insights, showcasing a robust methodology for lead scoring and optimization in the online education industry.