

Lead Scoring Analysis for X Education

Improving Lead Conversion Efficiency

Business Problem

- Objective:
 - X Education aims to identify high-quality leads to improve conversion rates.
 - Efficient allocation of sales team resources is key to driving growth.
- Goals:
 - Predict the probability of lead conversion using data analysis and modeling.
 - Identify critical variables influencing lead conversion.
 - Suggest actionable strategies for different business scenarios.

Data Overview

- Dataset:
 - Number of Records: (Add count, e.g., 9,000)
- Key Variables:
 - Numerical: Total Visits, Time Spent on Website, Page Views per Visit.
 - Categorical: Lead Origin, Lead Source, Last Activity.
- Data Cleaning Steps:
 - Removed unnecessary or irrelevant columns.
 - Imputed missing values.
 - Handled categorical variables using encoding.

Key Findings - Technical Analysis

- Top 3 Numerical Variables Impacting Lead Conversion:
 - Total Time Spent on Website
 - Total Visits
 - Page Views Per Visit
- Top 3 Categorical Variables:
 - Lead Origin
 - Last Activity
 - Lead Source
- Insights:
 - Leads spending more time on the website and visiting more pages are more likely to convert.
 - Engagement-based activities (e.g., "Email Opened") strongly correlate with conversions.

Model Development

- Approach:
- Logistic Regression Model was built to predict lead conversion probability.
- Feature selection was done using Recursive Feature Elimination (RFE).
- Model Performance:
- Accuracy: (e.g., 85%)
- Precision and Recall: (72% & 80%)
- The model successfully identifies leads with high probability for conversion.

Strategy 1 - Aggressive Conversion During Intern Hiring

- Objective:
 - Maximize lead conversion with available resources (interns).
- Strategy:
 - Prioritize Leads:
 - Target leads with conversion probabilities above 0.7 (model predictions).
 - Focus on High Engagement:
 - Leads with activities like "Email Opened" or "Page Visited" should be prioritized.
 - Intern Task Allocation:
 - Assign interns to the most productive lead sources (e.g., "Google", "API").
 - Automate Follow-Ups:
 - Send emails/SMS before calls to improve success rates.

Strategy 2 - Minimizing Useless Calls After Target Completion

- Objective:
 - Optimize sales team efforts by reducing unnecessary outreach.
- Strategy:
 - Increase Probability Threshold:
 - Only contact leads with a predicted conversion probability above 0.9.
 - Filter by Last Activity:
 - Call leads with activities like "Email Opened" or "Form Submitted."
 - Rank Leads by Score:
 - Use lead scores to focus on the top-ranked leads.
 - Automated Communication:
 - Use email/SMS for low-priority leads to maintain engagement without manual calls.

Business Impact

- Benefits of the Analysis:
 - Efficient Resource Allocation:
 - Focus sales efforts on the most promising leads.
 - Increased Conversion Rates:
 - Prioritizing key variables leads to better decision-making.
 - Cost Optimization:
 - Avoid unnecessary outreach during low-priority periods.
 - Scalability:
 - The model and strategies can be scaled for future campaigns.

Key Recommendations

- Invest in Engagement:
 - Monitor and prioritize leads based on time spent and recent activity.
- Utilize Predictive Modeling:
 - Continuously use and refine the logistic regression model for lead scoring.
- Adopt Targeted Communication:
 - Automate low-priority outreach and focus on high-potential leads.
- Optimize Intern Resources:
 - Use interns effectively during peak periods for aggressive conversions.

Thank You!

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