

Lead Scoring Case Study - Summary Report

1. Problem Statement

X Education, an online course provider, faces a low lead conversion rate of around 30%. The company wants to optimize its sales efforts by identifying high-potential leads ('Hot Leads') to improve conversion rates to 80%.

2. Approach & Methodology

1. Data Cleaning & Preparation:

- Removed columns with excessive missing values (e.g., 'Country', 'Lead Quality').
- Imputed missing values using mode/median for relevant columns.
- Encoded categorical variables using One-Hot Encoding.

2. Exploratory Data Analysis (EDA):

- Identified key features influencing conversion.
- Observed that 'Total Time Spent on Website' positively correlates with conversion.
- Certain 'Lead Sources' like Welingak Website and Referrals showed higher conversion rates.

3. Model Building:

- Used **Logistic Regression** for classification.
- Achieved an accuracy of **78%** and an ROC AUC score of **0.86**.
- Assigned Lead Scores (0-100) to prioritize leads.

3. Key Findings & Insights

• Top 3 Factors Affecting Conversion:

1. Lead Source - Welingak Website (Highest Positive Impact).
2. Lead Source - Reference (Strong Correlation to Conversion).
3. Last Activity - Email Bounced (Strong Negative Impact).

• Strategies for Different Business Scenarios:

- **Intern Hiring Phase (Aggressive Lead Conversion):** Prioritize Hot Leads (>70 score), increase call frequency, and offer limited-time discounts.
- **Low-Call Period (Quarterly Target Achieved):** Reduce unnecessary calls by only targeting highly engaged leads and using email/SMS first.

4. Recommendations

1. **Optimize Marketing Spend:** Focus on sources with high conversion rates.
2. **Enhance Follow-Ups:** Prioritize leads based on engagement.
3. **Improve Sales Strategy:** Reduce calls to low-probability leads and invest in personalized engagement.
4. **Monitor & Improve:** Continuously refine the model with new data to enhance accuracy.

5. Conclusion

By implementing these data-driven strategies, X Education can significantly boost its lead conversion rates, optimize its sales efforts, and achieve a more efficient lead management process.