LEAD SCORING ANALYSIS

Presented to: CHIEF DATA SCIENTIST

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INTRODUCTION

- **Objective**: Improve lead conversion rates through data-driven insights.
- Approach: Analyze past lead data to identify high-converting patterns.
- Business Impact: Optimized marketing efforts and increased sales efficiency.

DATA OVERVIEW

- Dataset: Leads.csv (Customer interactions & lead characteristics)
- Features: Demographics, engagement levels, marketing channels, etc.
- Target Variable: Conversion (Lead converted to a customer)

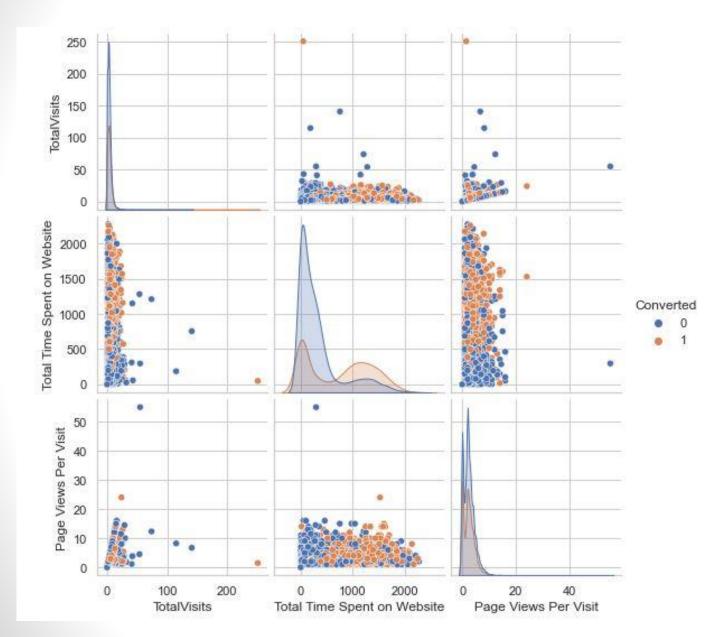
DATA CLEANING & PREPERATION

- Handled missing values & outliers.
- Encoded categorical variables.
- Feature engineering for better predictive power.

EXPLORATORY DATA ANALYSIS (EDA)

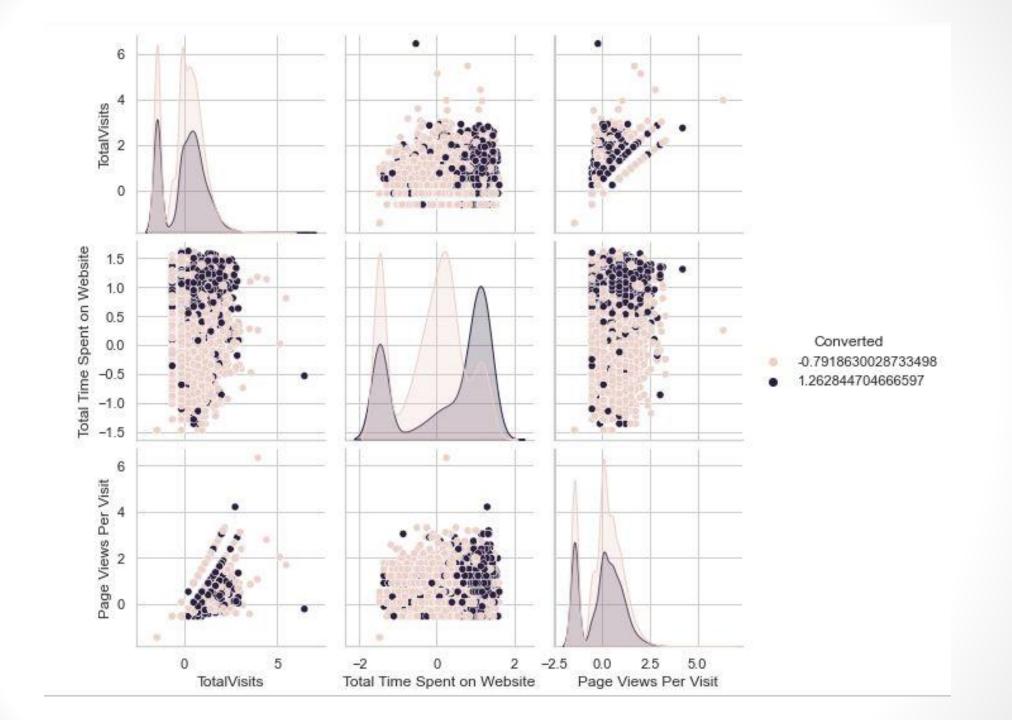
- Key insights from the dataset:
 - Top sources of high-converting leads.
 - Customer behavior patterns.
 - Impact of engagement on conversions.
- Visualizations (charts & graphs to support findings).

CORRELATION BETWEEN 3 VARIABLES



Graphical representation depicting the correlation between variables in terms of conversion rate:

- > Total Visits
- > Total Time spent on Website
- ➤ Page Views per Visit



Correlation between all Variables

-0.75

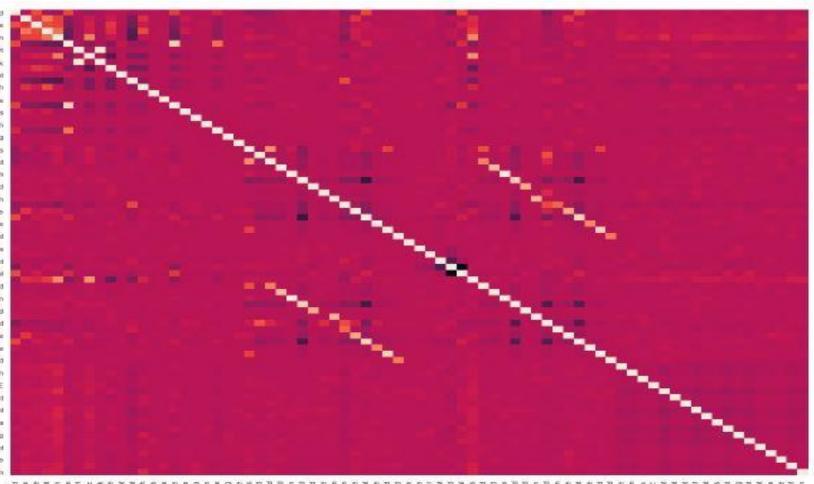
- 0.50

-025

-0.00

- -D.25

Total Time Spent on Website Lead Ongin, Landing Page Submission Lead Origin_Lead Import Lead Source_Facebook Lead Source_Live-Citat Lead Source Organic Search Lead Source_Press_Release Lead Source_Referral Sites Lead Source_WeLearn Lead Source_tang Do Not Email Yes Last Activity_Ernal Sourced Last Activity_Email Marked Spain Last Activity_Empli Received Last Activity_Had a Phone Conversation Last Activity_Page Visited on Website Last Activity_Unreachable Last Activity: View in browser link Clicked What is your current occupation_Housewills What is your current occupation, Student What is your ourrent occupation_Working Professional Last Notable Activity_Email Bounced Last Notable Activity. Email Marked Spain Last Notable Activity_Email Received Last Notable Activity_Woolfled Last Notable Activity_Page Visited on Website Last Notable Activity, Unreachable Last Notable Activity_View in browser link Clicked Specialization: Business Administration Specialization_E-COMMERCE Specialization_Healthcare Management Specialization_Human Resource Management Specialization_International Business Specialization_Media and Advertising Specialization_Retail Management Specialization_Services Excellence Specialization_Travel and Tourism



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MODEL BUILDING & EVALUATION

- Models Used: Logistic Regression, Decision Trees, Random Forest, etc.
- Performance Metrics: Accuracy, Precision, Recall, F1-score, AUC-ROC.
- Best Model: Recursive Feature Elimination.

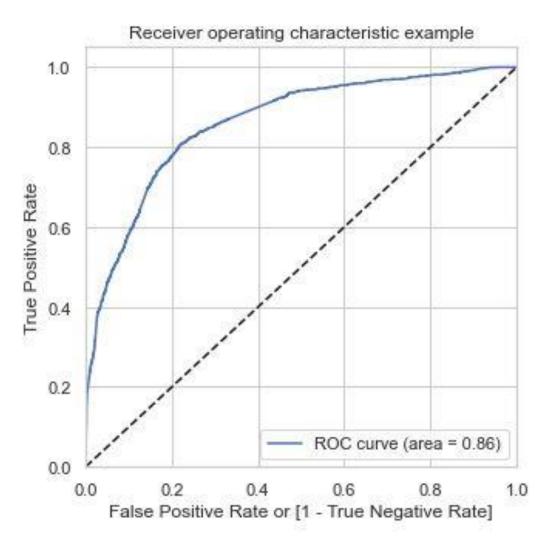
KEY BUSINESS INSIGHTS

- High-converting leads come from [Top Channels].
- Customer engagement level is a strong predictor of conversion.
- Optimized marketing strategies can improve conversion rates by X%.

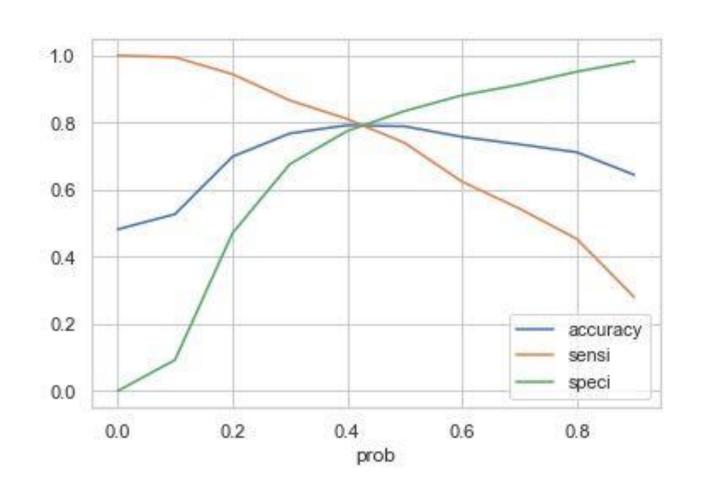
TOP IMPACTINGFACTORS FOR LEAD GENERATION

| | Features | VIF |
|----|--|------|
| 9 | What is your current occupation_Unemployed | 2.82 |
| 1 | Total Time Spent on Website | 2.00 |
| 0 | TotalVisits | 1.54 |
| 7 | Last Activity_SMS Sent | 1.51 |
| 2 | Lead Origin_Lead Add Form | 1.45 |
| 3 | Lead Source_Olark Chat | 1.33 |
| 4 | Lead Source_Welingak Website | 1.30 |
| 5 | Do Not Email_Yes | 1.08 |
| 8 | What is your current occupation_Student | 1.06 |
| 6 | Last Activity_Had a Phone Conversation | 1.01 |
| 10 | Last Notable Activity_Unreachable | 1.01 |

ROC (Area under curve shown as 0.86)



Optimal Cut-Off (Cut-off came out to be 0.42)



RECOMMENDATIONS & NEXT STEPS

- Focus marketing budget on high-converting sources.
- Personalize engagement strategies based on lead behavior.
- Continuous monitoring & model retraining for improved accuracy.

CONCLUSION

- Data-driven lead scoring can significantly boost sales efficiency.
- Implementing the insights can drive higher conversion rates.
- Future scope: AI-driven automation for dynamic lead prioritization.

THANK YOU!