

ALY 6980 CAPSTONE PROJECT

Group 3

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Introduction

- **Data Cleaning & Integration:** Ensure accurate and consistent datasets.
- **Streamlit Dashboard:** Track customer interactions efficiently.
- **Growth Optimization:** Prioritize high-potential opportunities.

BUSINESS QUESTION



Utilizing past data, how can Big Sky improve leads and transactions by building stronger client relationships?

Tools and Data To Use



R AND PYTHON FOR DATA CLEANUP



INTERACTIVE DASHBOARD FOR
ASSESSMENT AND EDITS



COMPARISON OF DATASETS FOR INDUSTRY
RESEARCH

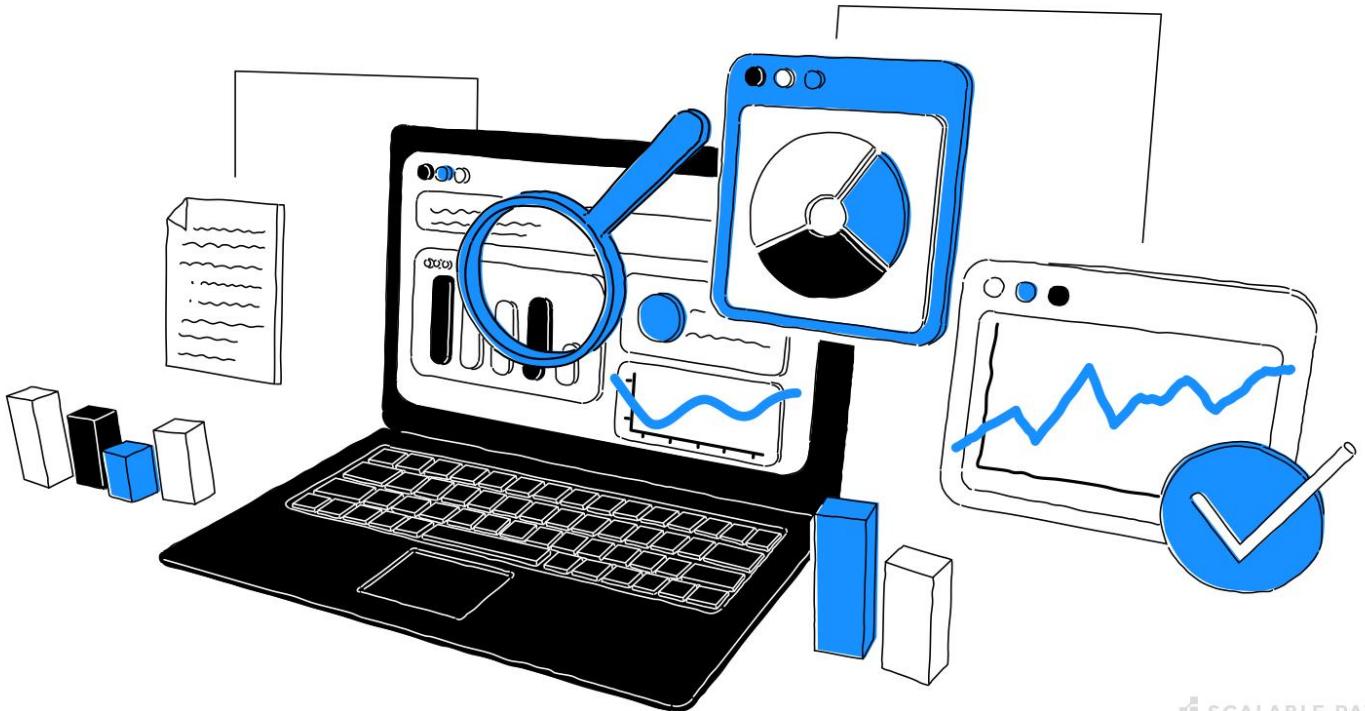
Data Cleaning Process

- Statistical Overview: Print table stats and identify missing values.
- Merging: Combine datasets and ensure smooth integration.
- Column Name Standardization: Convert to lowercase, replace spaces/dots with underscores.
- Duplicate Columns: Identify and distinguish duplicates.
- Unnecessary Columns: Remove irrelevant columns (e.g., id, "last enriched time").
- Finding Missing Values

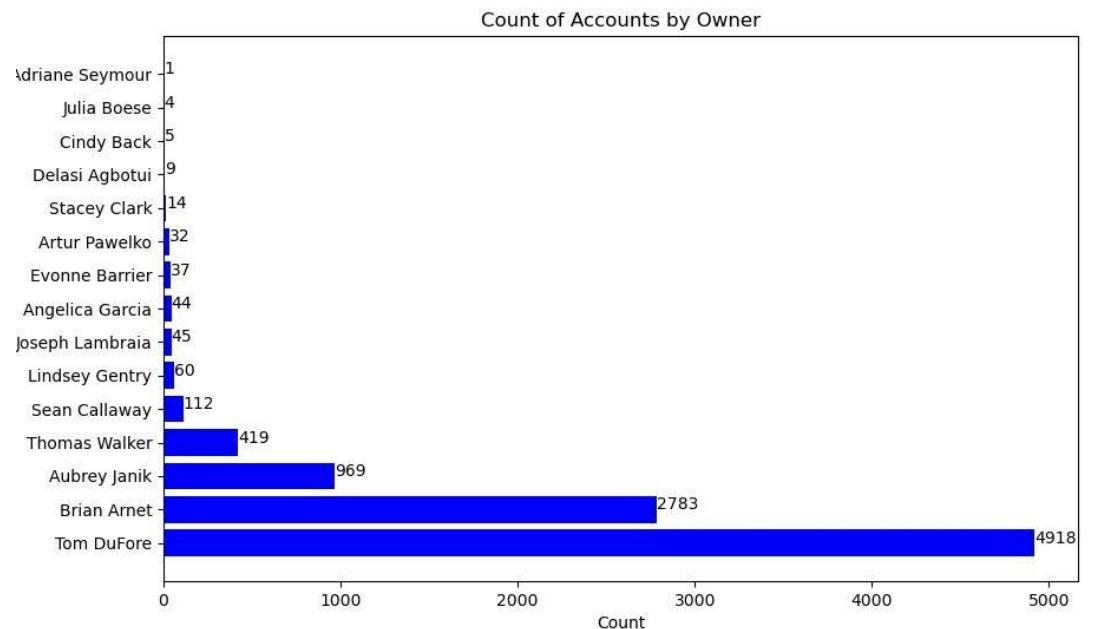
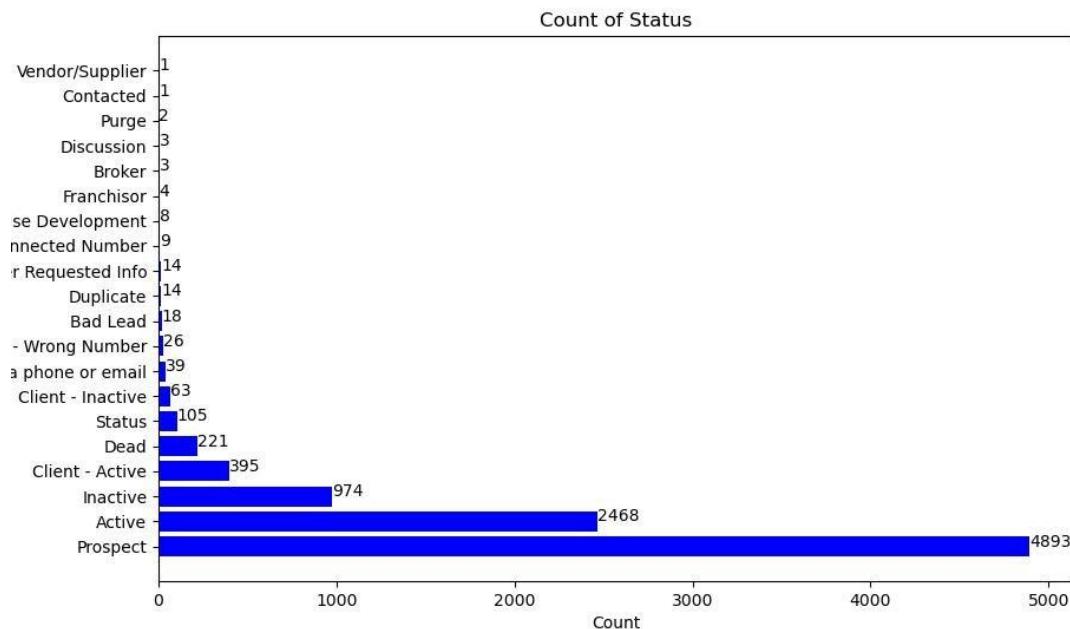


Exploratory Data Analysis

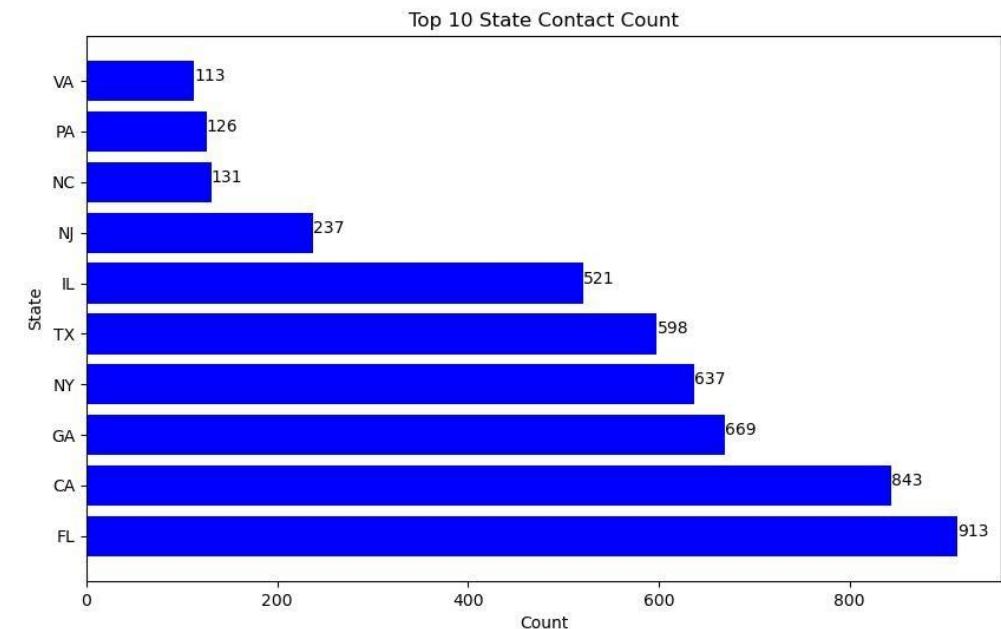
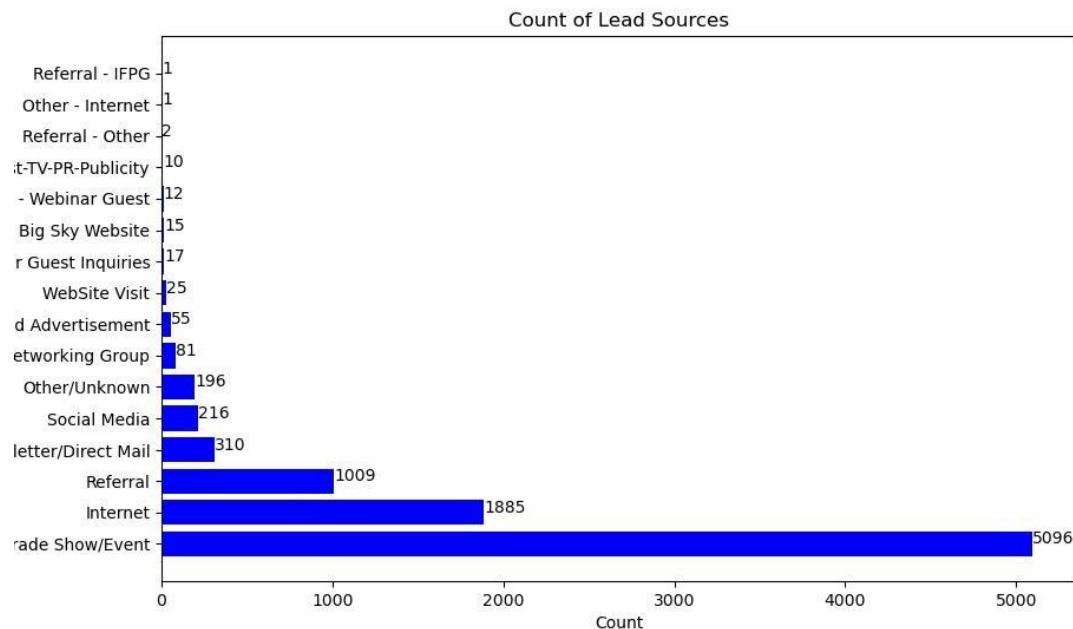
- **Identify Trends & Patterns:**
Focus on key attributes to target potential clients.
- **External Datasets Comparison:** Evaluate similar external datasets for added insights.
- **Variable Relationships:**
Examine correlations for business insights and addressing concerns.



EXPLORATORY DATA ANALYSIS (CONT.) - CLIENT ACCOUNTS



EXPLORATORY DATA ANALYSIS (CONT.) - LEADS AND CONTACTS



Key Questions & Issues to Address

- **Focus Areas for Client Acquisition:**
- Our analysis will highlight key areas to focus on for landing more clients.
- **Inquiry-to-Callback Time:**
- What is the average, minimum, and maximum number of days from inquiry to callback?
- **Business Relationship Stages:**
- Count the number of “probabilities” in the dataset, which may represent stages in business relationship development.
- **State/Region Impact:**
- Do certain states or regions influence the number of inquiries and probabilities in the dataset?





Final Words/What To Expect

- Construction of customer management accounts.
- Data collection methods to gain important metrics.
- Creation of Interactive dashboard on data insights.
- Plan and solutions for long-term growth.

Concluding Thoughts

- Opportunity to improve internal process.
- The implementation of data governance.
- Forward-focus plan for Big Sky.
- The rise of new leads.

