Data Glacier
Your Deep Learning Partner

Exploratory Data Analysis

Bank-Marketing-Campaign

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Group Name: Team Winning Mode

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GitHub Link

https://github.com/poojaravi05/Bank-Marketing-Campaign-

Agenda

Problem Statement

Approach

EDA

EDA Summary

Recommendations

Proposed Models

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Problem Statement

- ABC Bank is planning to launch a new term deposit product and wants to identify potential customers who are more likely to purchase the product.

- They aim to develop a machine learning (ML) model based on customers' past interactions with the bank or other financial institutions.

- The purpose of this model is to assist in shortlisting customers with a higher probability of buying the term deposit, allowing the bank's marketing channels to focus their efforts and resources on those customers.

- By targeting the right customers, ABC Bank aims to optimize its marketing campaigns and save valuable resources and time.

Approach

- Importing the necessary libraries and the dataset

- Checking for missing/null values, duplicate values, and outliers

- Cleaning the data by treating/removing the null/duplicates/outliers present in the dataset

- Performing Exploratory Data Analysis on the cleaned data

- Few visualizations were added to better assess the data and to draw recommendations from them

- Modelling the data

- Getting to a conclusion.

# Exploratory Data Analysis
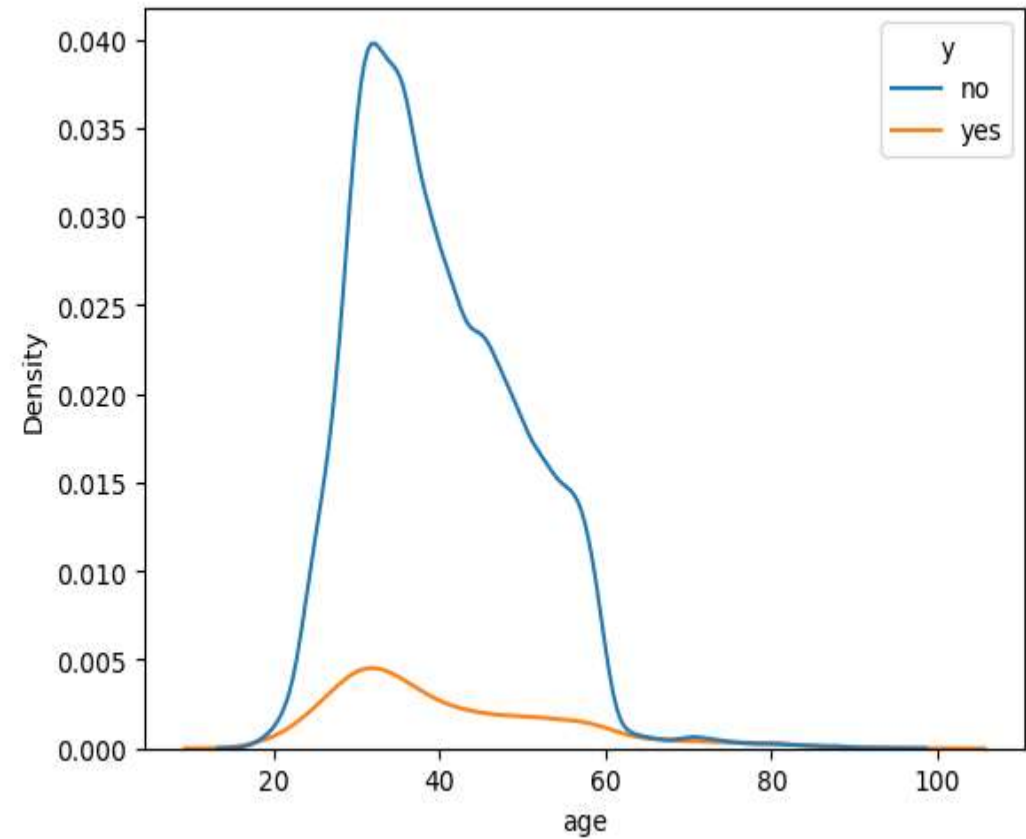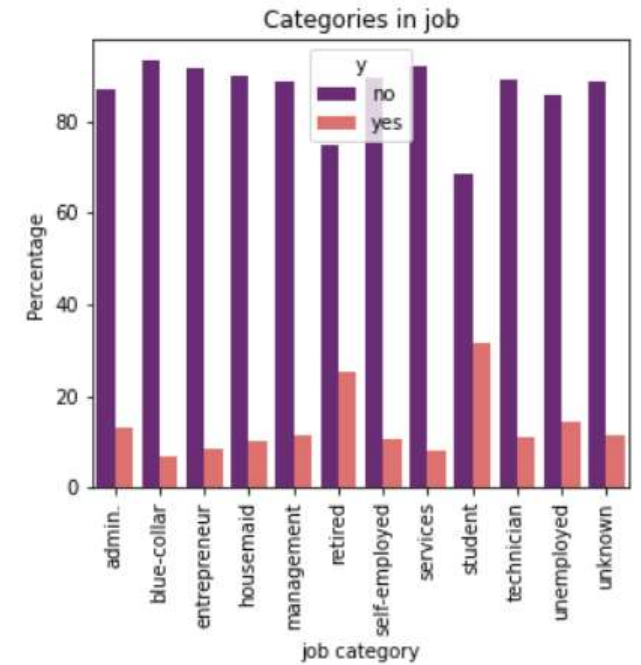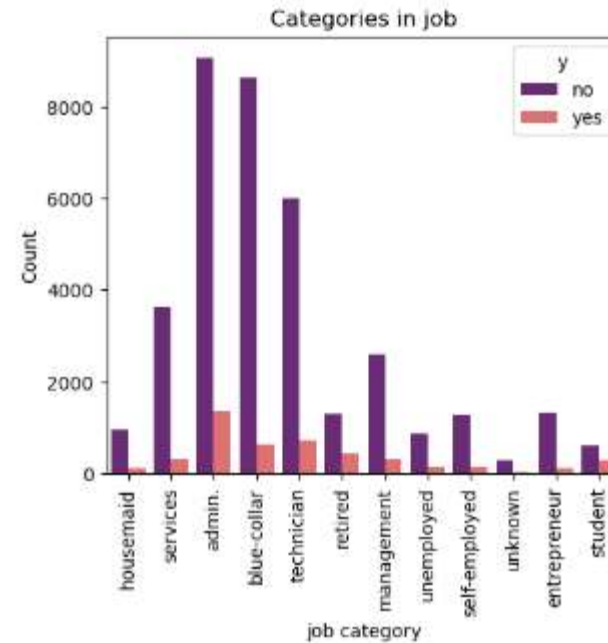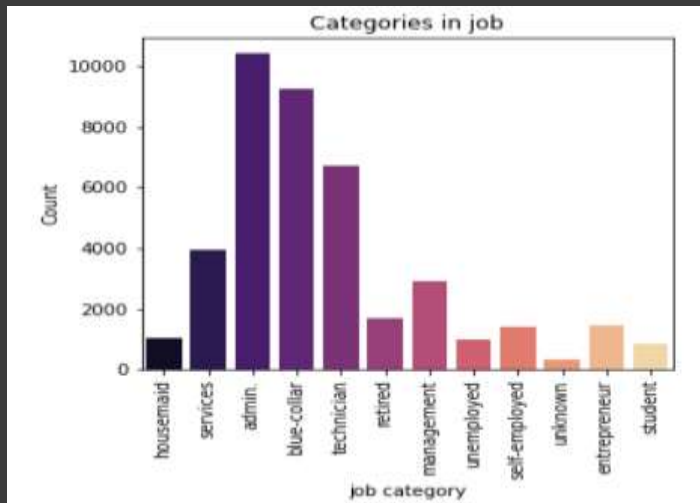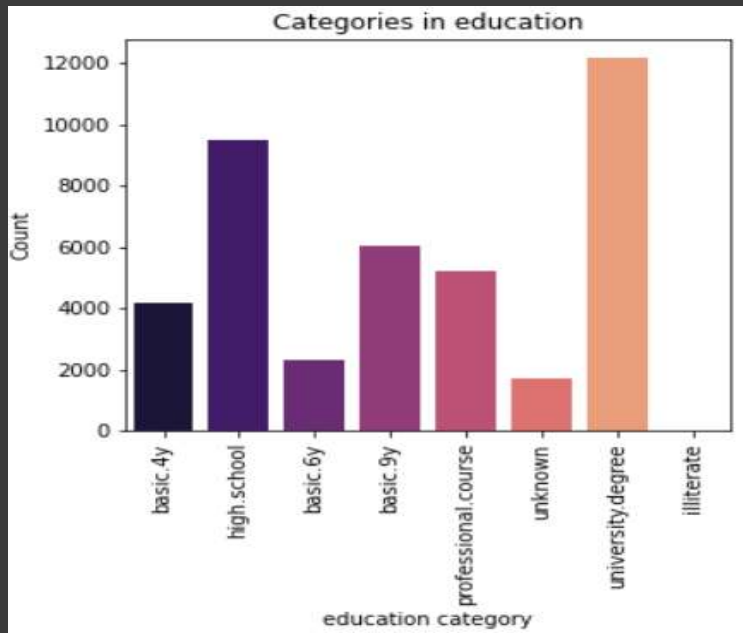
Analysis of Job Category

- Most people who were contacted had an admin or a blue-collar job.
- Students were the least contacted. This may however be due to a lesser number of students .
- However, the campaign tends to have a higher success rate among students and the least success among those with blue-collar jobs.
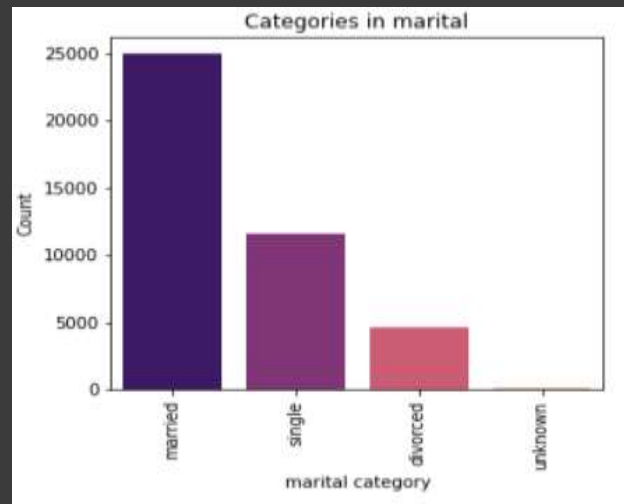
Analysis of Marital Category
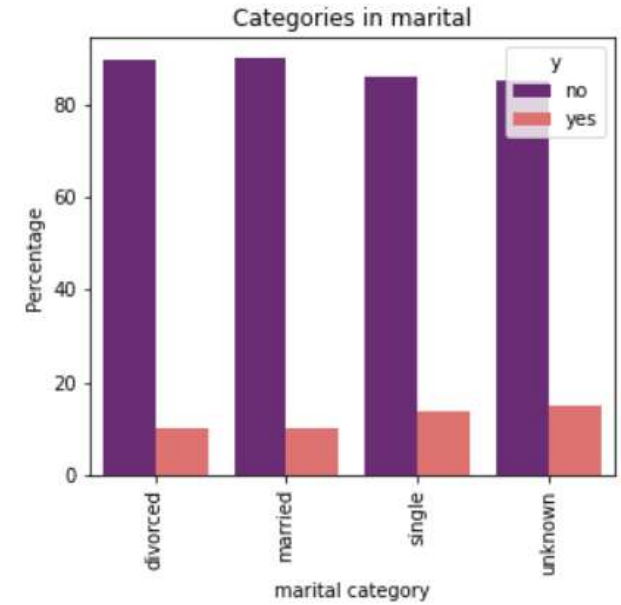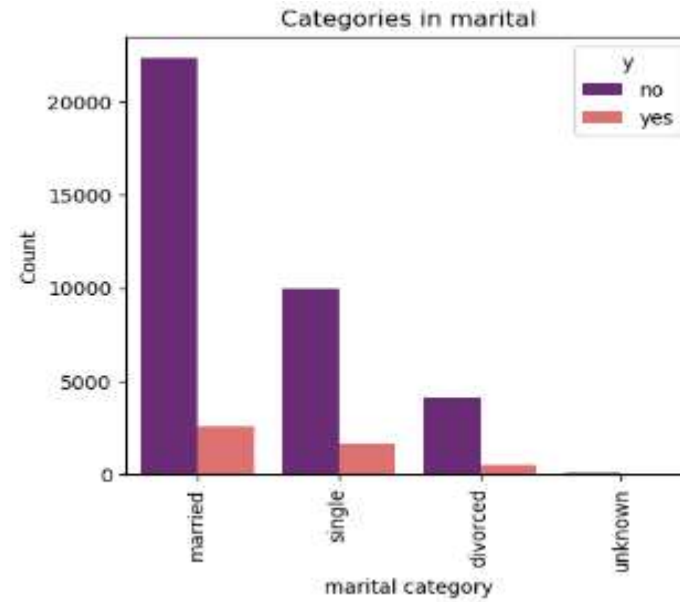
- Most people contacted were married.
- The marital status however does not seem to play a role in whether they buy the term deposit product or not.
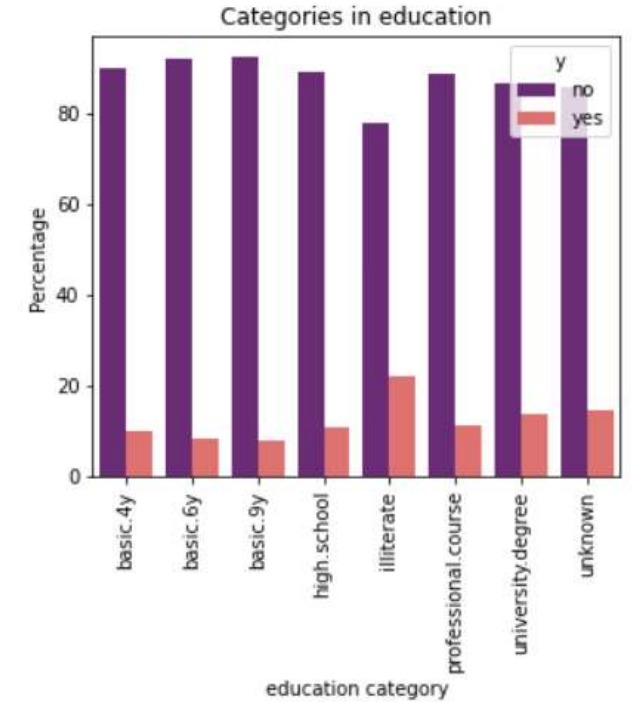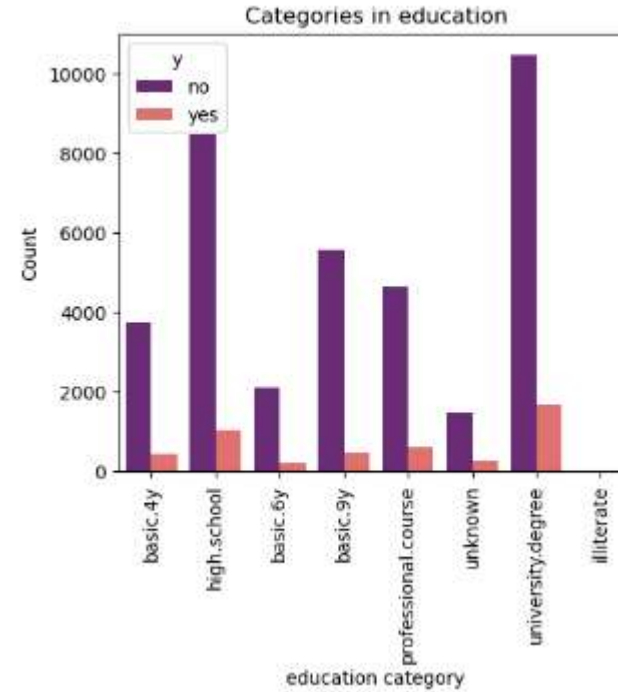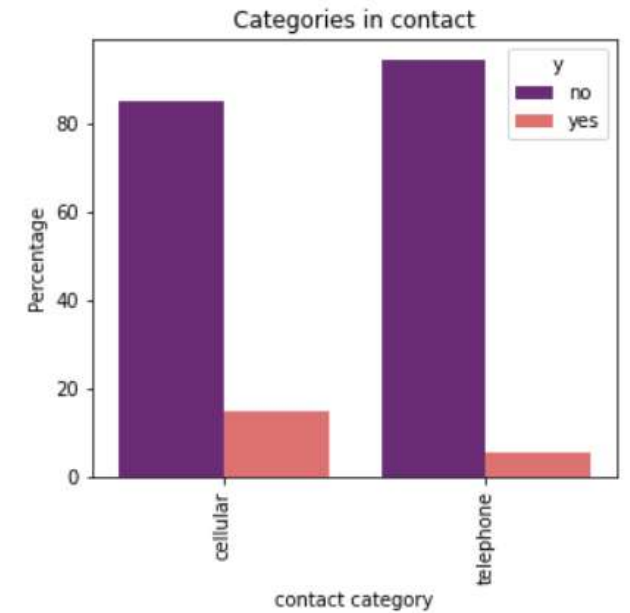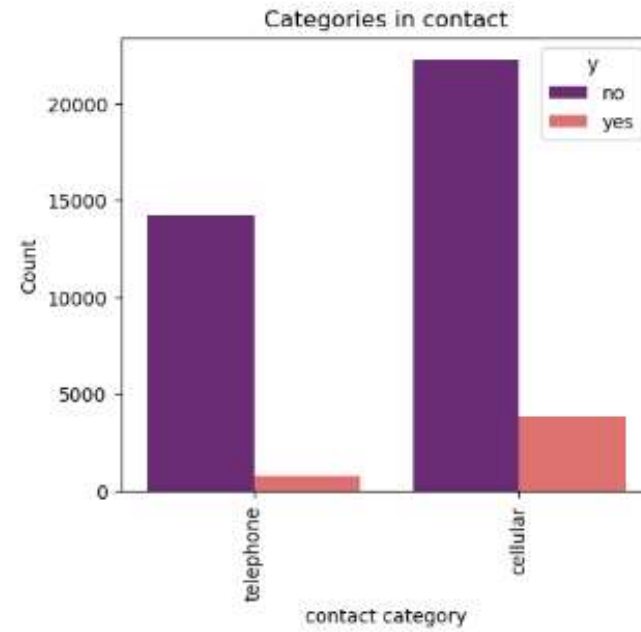
Analysis of Education Category

- Most customers contacted were university degree holders.
- About 20% of the illiterate customers that were contacted decided to buy the product, which is the highest among all education levels even though they were the least contacted(18).
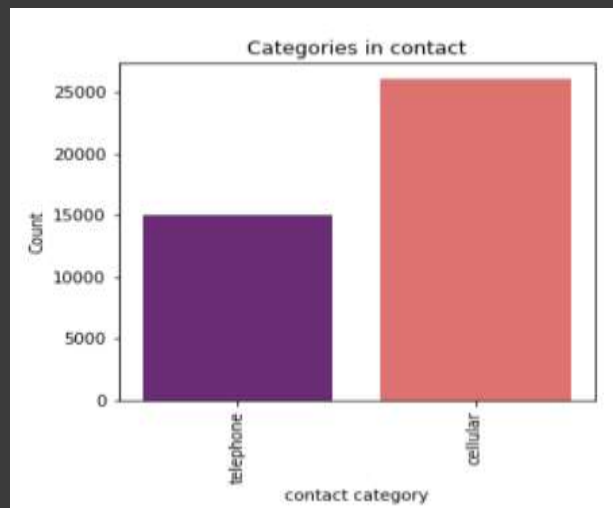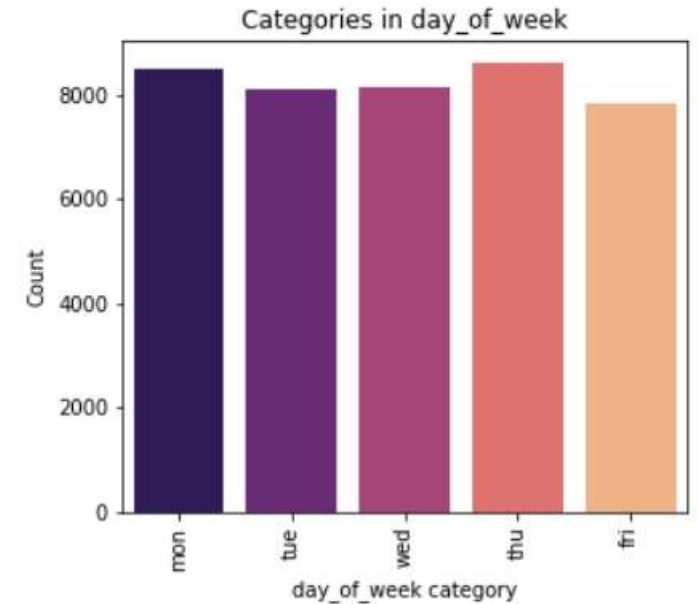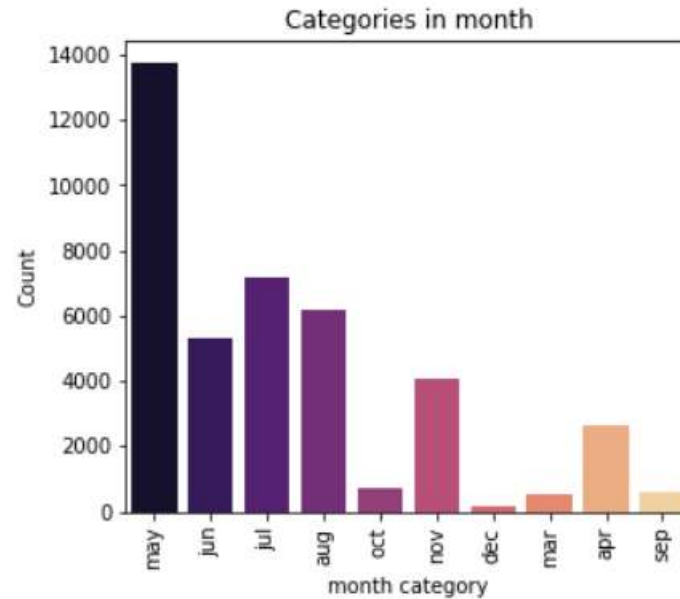
Analysis of Contact Category

Most people were contacted via mobile. Those contacted by mobile are more likely to buy the product than those who were contacted through telephone.

Analysis of Month & Day of Week Categories

Findings and Recommendations

- Try to target more students as they seem to be more likely to buy the product.
- Increase the reach of the campaign to those who are illiterate.

Proposed Models

Being a binary classification problem, the initial model we propose is a logistic regression model to find the probability that a customer either bought or did not buy the product.

Next, we propose decision trees and random forest classifiers.

Finally, we propose an SVM

Thank You