Week 10 Deliverable

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Problem Description:

ABC Bank wants to predict whether a customer will subscribe to their term deposit product based on past interactions. They aim to develop a machine learning model to identify customers who are more likely to purchase the product. In other words, they want to shortlist customers whose chances of buying the product is more.

EDA:

We've tried several EDA approaches, which will be manifested as follows. Improving the understanding of features, this analysis looks at both categorical and continuous data. By studying the connections and patterns in the data, we get a clearer view. This explanation shows why we used feature analysis in EDA and focuses on the results and what we learned from them. Among clients with different ages, education backgrounds, marital statuses, etc, we plan to seek out how many of them subscribe to the terms under each category. The EDA method we chose is the bar chart, which would help us directly sense the number of people who subscribe to the terms or not. Specifically, we plotted 4 bar charts containing number of people subscribing to the terms with different ages, jobs, educations, and marital statuses, and we found out for each of these attributes, the number of people who do not subscribe to the terms surpasses the number of people who subscribe to it. Another important analysis that was taken into consideration was to calculate the conditional probability likelihood of customers' willingness to subscribe. This was done predominantly on categorical attributes such as age, education, housing, and loan. This analysis focused on the success rate of a particular group rather than the total count, as this can resolve skewed datasets such as over representation and under representation.

Final Recommendation:

For our final recommendation, we will conduct a more in-depth analysis to examine the relationships between features. This will enable us to draw more accurate conclusions from the data, allowing us to effectively apply a machine learning model to predict whether a customer will subscribe or not.