

# Advanced Data Visualization and Correlation Analysis

by Siphosethu Rag

In this analysis, I embarked on a journey to unravel the mysteries hidden within a dataset. My goal was to understand whether I could predict whether a customer wears glasses based on various characteristics provided in the data. I began by meticulously preparing the data, ensuring it was in a format suitable for training a machine learning model.



This involved encoding categorical variables and splitting the data into features and target variables, as well as dividing it into training and testing sets to validate my model's performance.

Next, I delved into the world of machine learning algorithms, selecting a Random Forest Classifier as my trusty guide through the maze of data. With my classifier in hand, I embarked on the training journey, feeding it with knowledge from the training data to help it learn the intricate patterns hidden within

But my quest didn't end there. I needed to validate my model's prowess, ensuring it could stand the test of unseen data. Thus, I meticulously evaluated its performance using various metrics such as accuracy, precision, recall, and the confusion matrix. Through rigorous testing and analysis, I gained insights into my model's strengths and weaknesses, guiding me towards further refinement and improvement in my ongoing quest for knowledge.