

ANALYSIS OF MEDICAL INSURANCE PAYOUT DATA.

5 STAR TEAM

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Data Set

The dataset is for an insurance company with thousands of customers all over united states. The insurance company is trying to determine the annual insurance premium based on annual medical expenditure by the company.

The dataset shows that southeast region has the highest population of 27% of total population. The population of the 3 remaining regions are equally distributed.

Number of male customers is higher than the number of females. Which means males subscribe to health insurance than female. 51% of the population are male while female are 49%.

The average medical cost is USD 13,270 with a median value of USD 9,382.

The dataset contains the healthcare costs of 1338 patients

Age bracket is from 18 to 64 years old.

According to the dataset, 80% of the population are non-smokers while the remaining 20% are smokes,

Non-smokers outnumber smokers 4 to 1.

Sex and region of origin are evenly distributed.

Most of the patients' BMI frequency is concentrated between 27 - 33.

Majority of the population have no child while few number of them have between 1 and 3 children.



Executive Summary

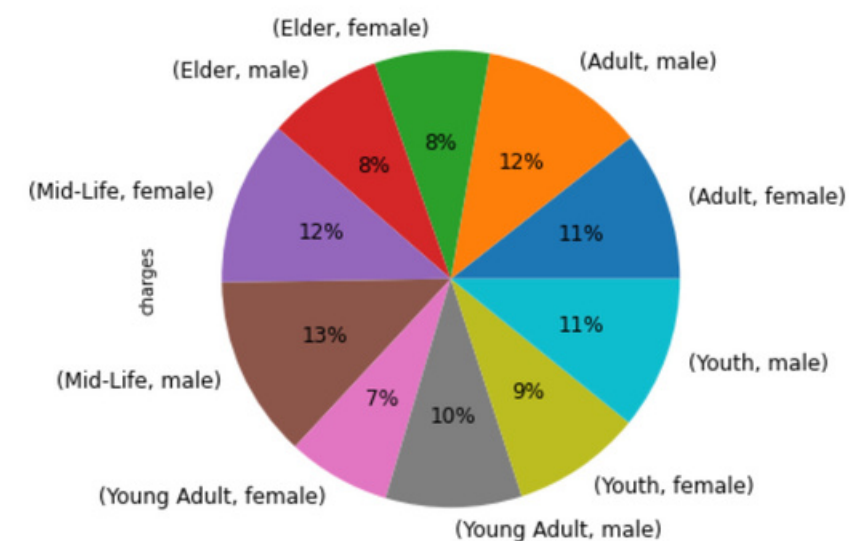
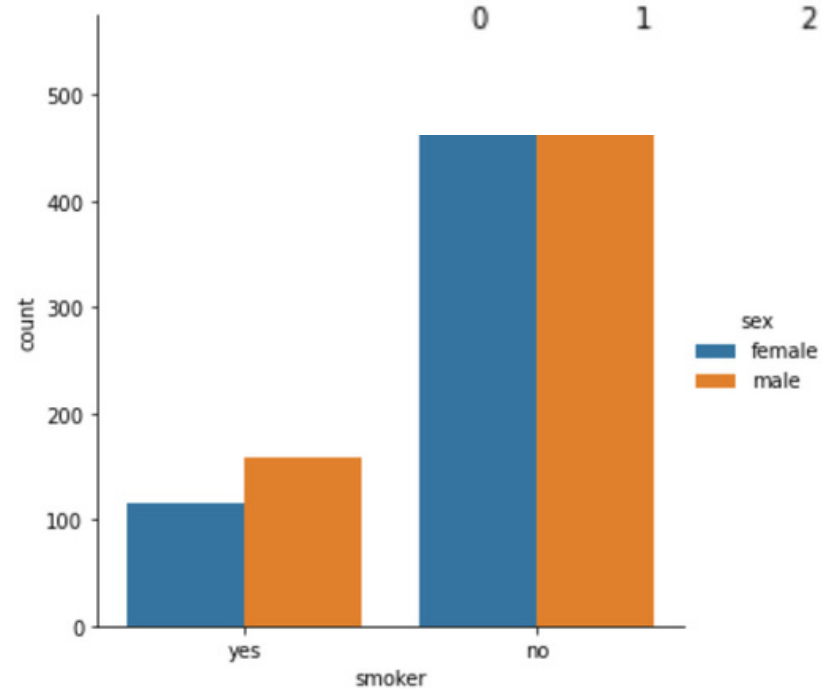
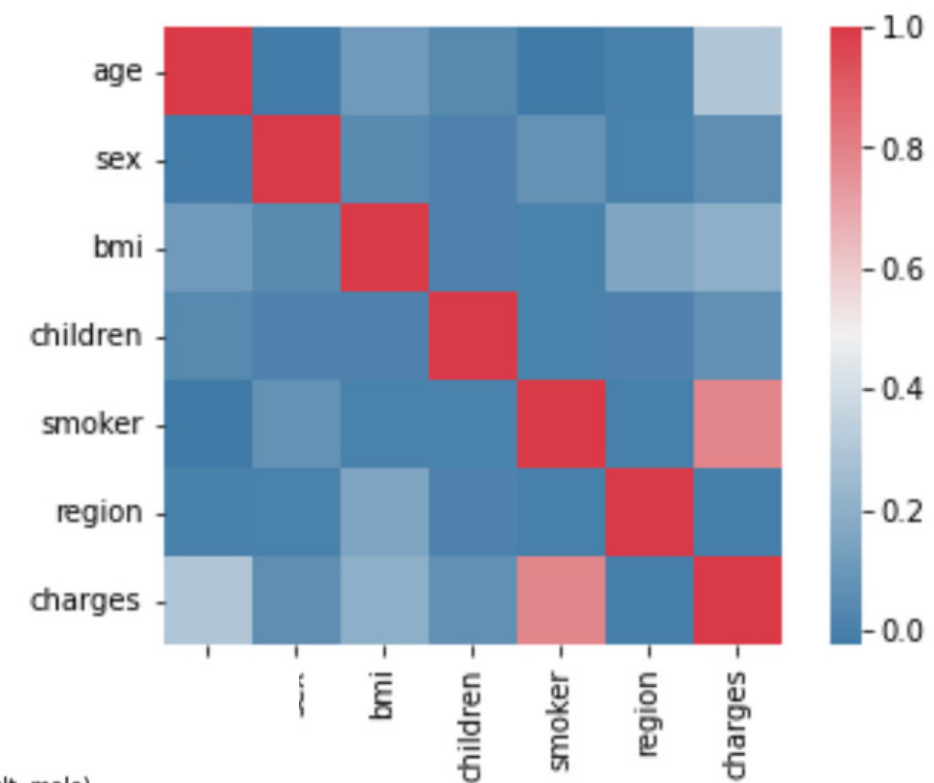
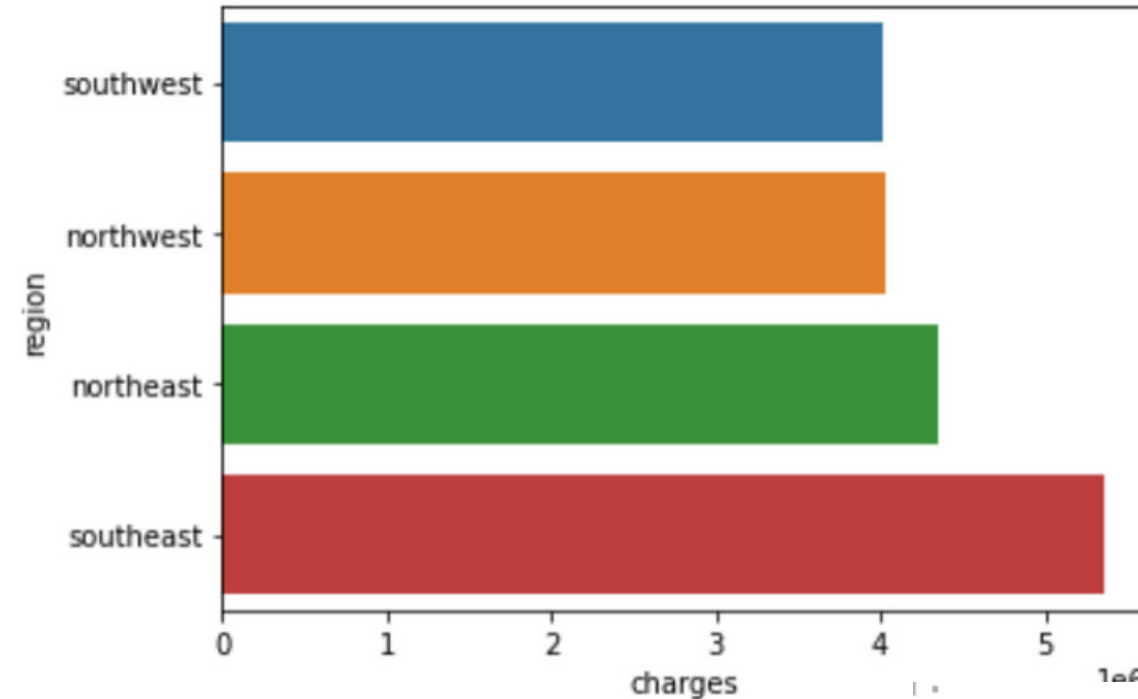
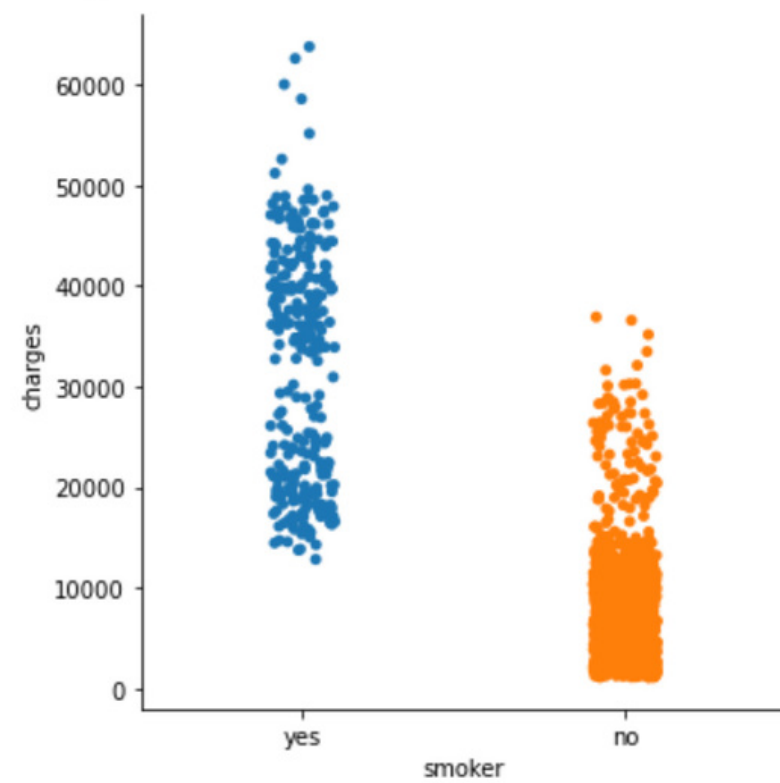
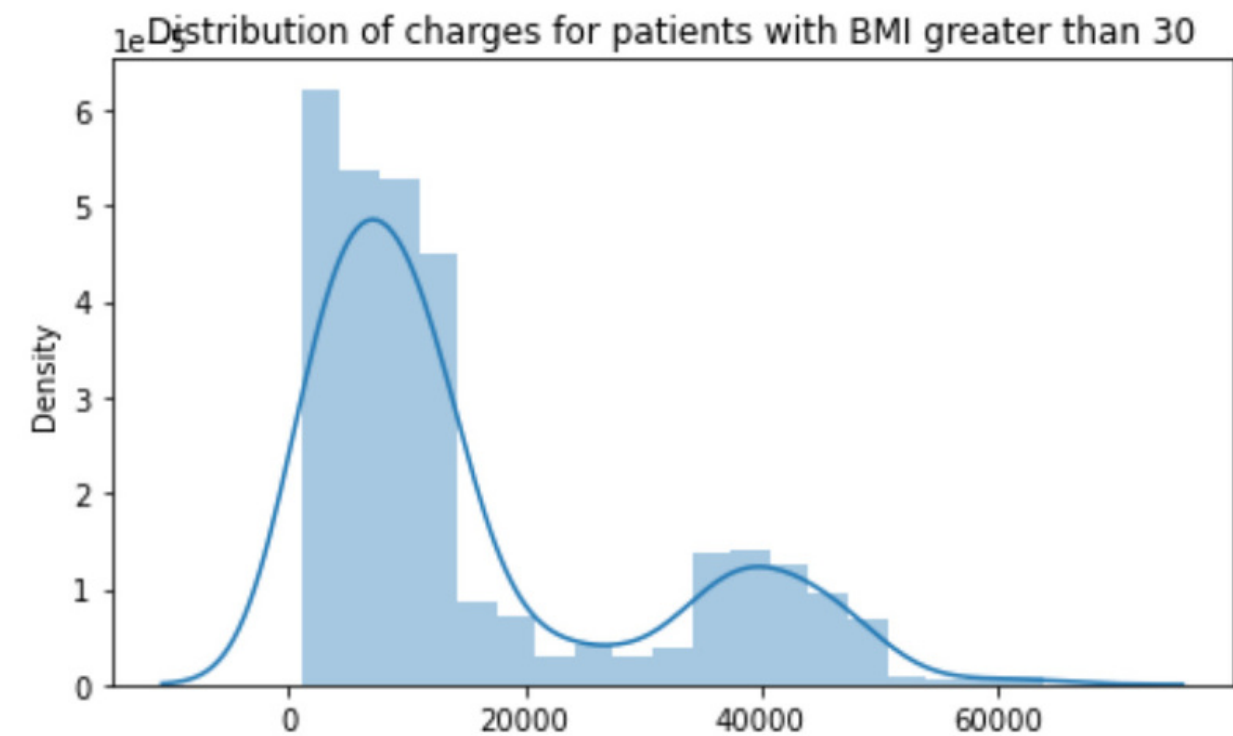
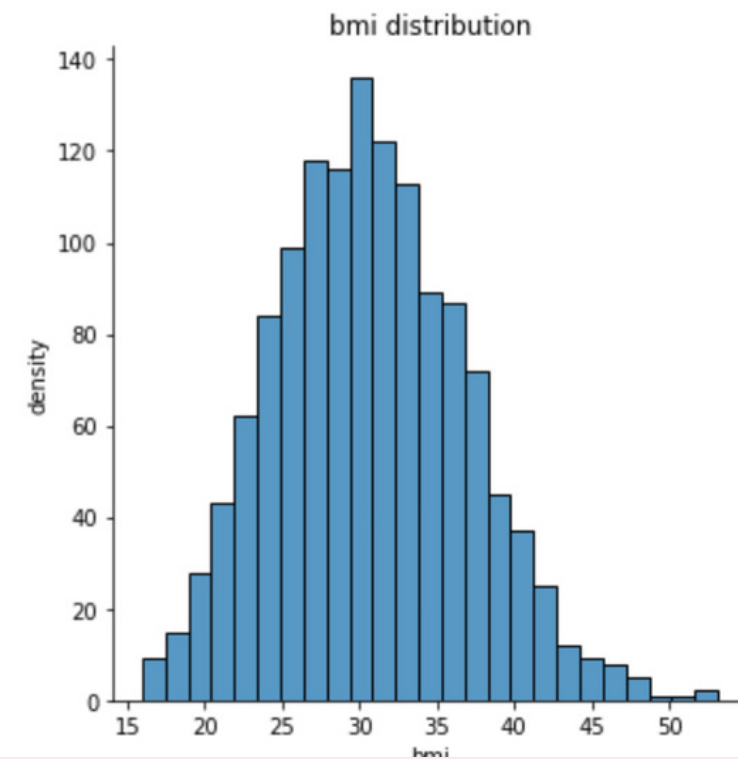
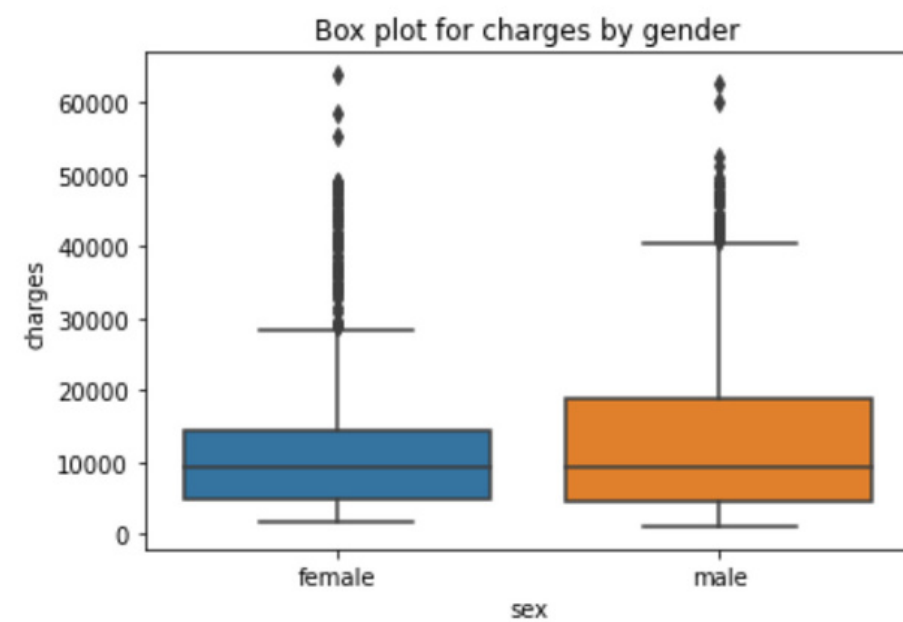
The more doctors we have in our database, the more patients will see that they can get quality healthcare via telehealth services.

Problem Statement

ACME insurance Inc. is an health Management Company, located in the United states of America, they have provided a data set by which we are to proffer solutions to help them determine the appropriate premiums to charge their target clients such that the company would make profit.

Insights

- The data provided shows the difference between smokers and non-smokers with respect to insurance charges paid by both males and females.
- It was observed that there are higher numbers of non-smokers in each region which means the proportion of smokers in each region is very low when compared to non-smokers.
- In each age range, the population of non-smokers is higher than that of smokers, with the highest set of smokers aged 19.
- It is Observed that older people with 1 to 4 children, and high BMI will pay higher insurance charges/claims.
- It is also observed that the BMI of women fluctuate based on number of children birthed.
- In conclusion, it was also observed that the medical claims/charges made by the people who smoke is greater than that of the non-smokers.
- The mean BMI of women with no children, one child and two children are not the same. Statistical evidence show that women with no child have a BMI of less than 30.5
- The women with 1 child has mean BMI of 30.05.
- The women with 2children have mean BMI 30.64.
- Insurance Charges for smokers are generally higher than non-smokers, worthy of note is the fact that smokers who are 60years of age pay the highest insurance charges.
- For Non-Smokers, increase in age is directly proportional to increase in insurance charges, and these charges are very low when compared to the insurance charges of smokers.





Recommendation

- They should target midlife people more, they incur less charges on them
- Create a package to get more women on board
- Create family packages in areas with less subscription
- ACME HMO is advised to re-negotiate the current charges with the care providers (hospitals) or get new hospital with same quality (perhaps better quality) but with a lesser charge in order to make more profit.

THANK YOU