

Understanding Health Indicators and Diabetes Risk

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Identify key health factors linked to diabetes to guide preventive strategies

Diabetes Health Indicators Dataset



Key Questions

- What percentage of the surveyed population reported having diabetes?
- Which health risk factors are most common among diabetic individuals?
- How does age impact diabetes risk?
- Are there correlations among health indicators?
- What lifestyle patterns relate to diabetes?

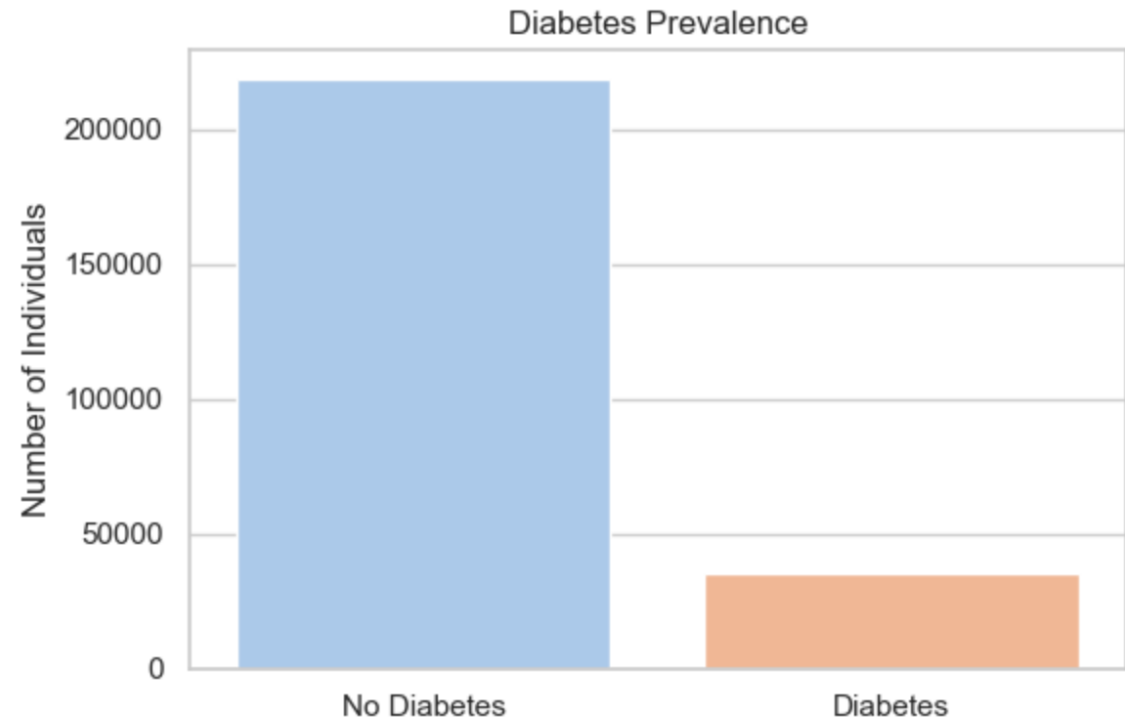


Dataset Overview

- 21 features, including BMI, smoking status, alcohol use, physical activity, age, etc.
- Target Variable: Diabetes_binary
- Clean and ready-to-use dataset (minimal cleaning needed).

Overall Diabetes Prevalence

- Show a bar plot comparing "No Diabetes" vs. "Diabetes" counts.
- Approximately 13.6% of the population in the dataset has been diagnosed with diabetes.
- The remaining 86.4% are either non-diabetic or pre-diabetic.
- This highlights the importance of identifying risk factors early to prevent disease progression.



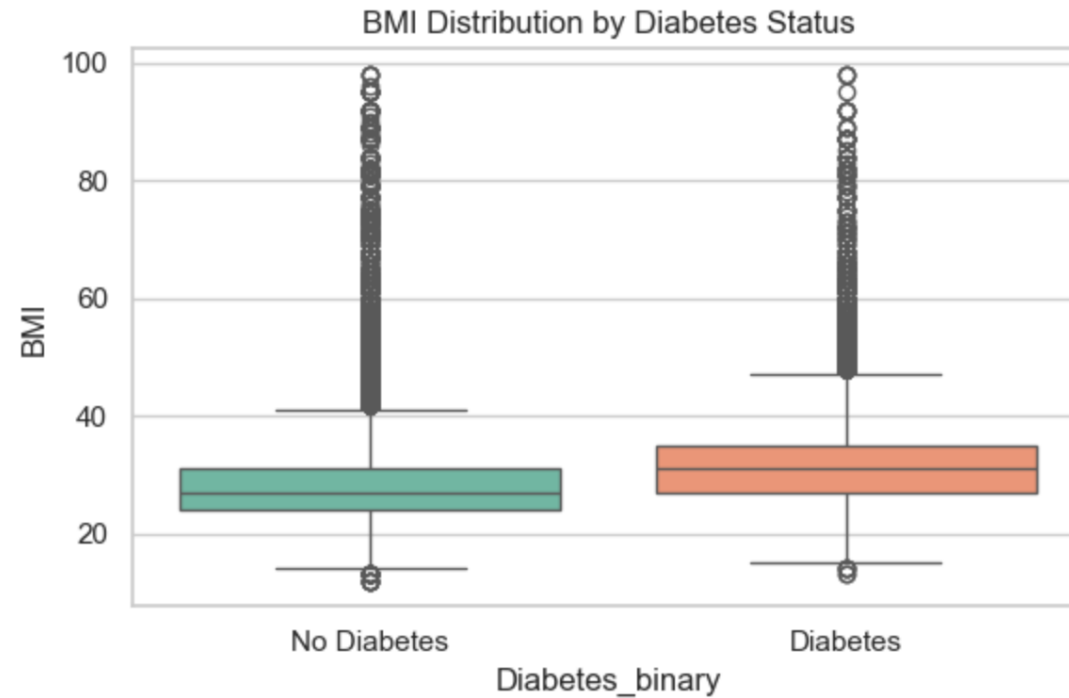
BMI and Diabetes

Boxplot

- Boxplot of BMI across diabetes status (No vs. Yes)

Insight:

- Higher BMI is more common among individuals with diabetes.



Age and Diabetes

- Histogram

Graph shows:

- 0 = No diabetes
- 1 =diabetes

Age category:

2= 25-29 yrs old

4=35-39 yrs old

6= 45-49 yrs old

8= 55-59 yrs old

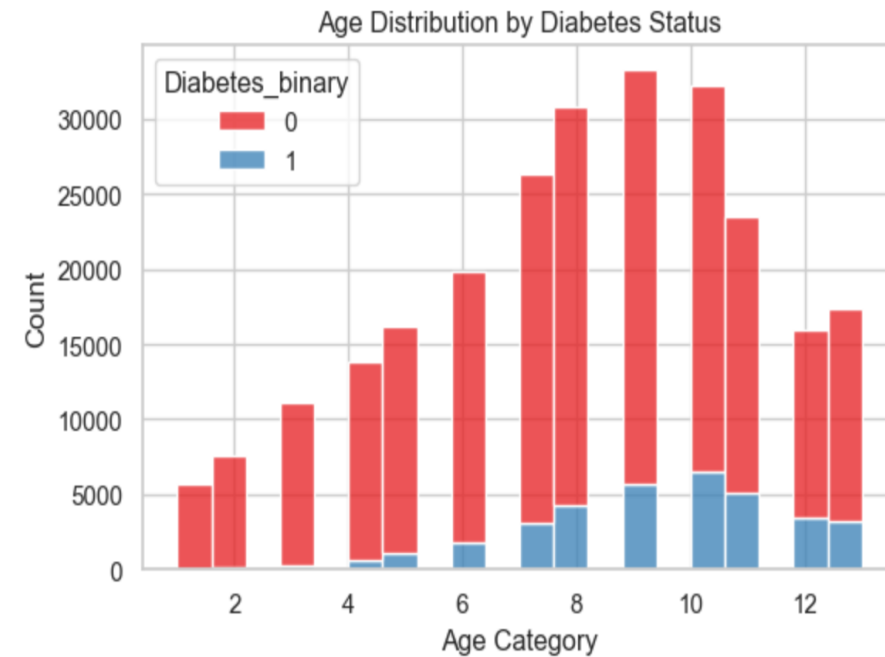
10=65-69 yrs old

12=75-79 yrs old

- Age distribution colored by diabetes status.

Insight:

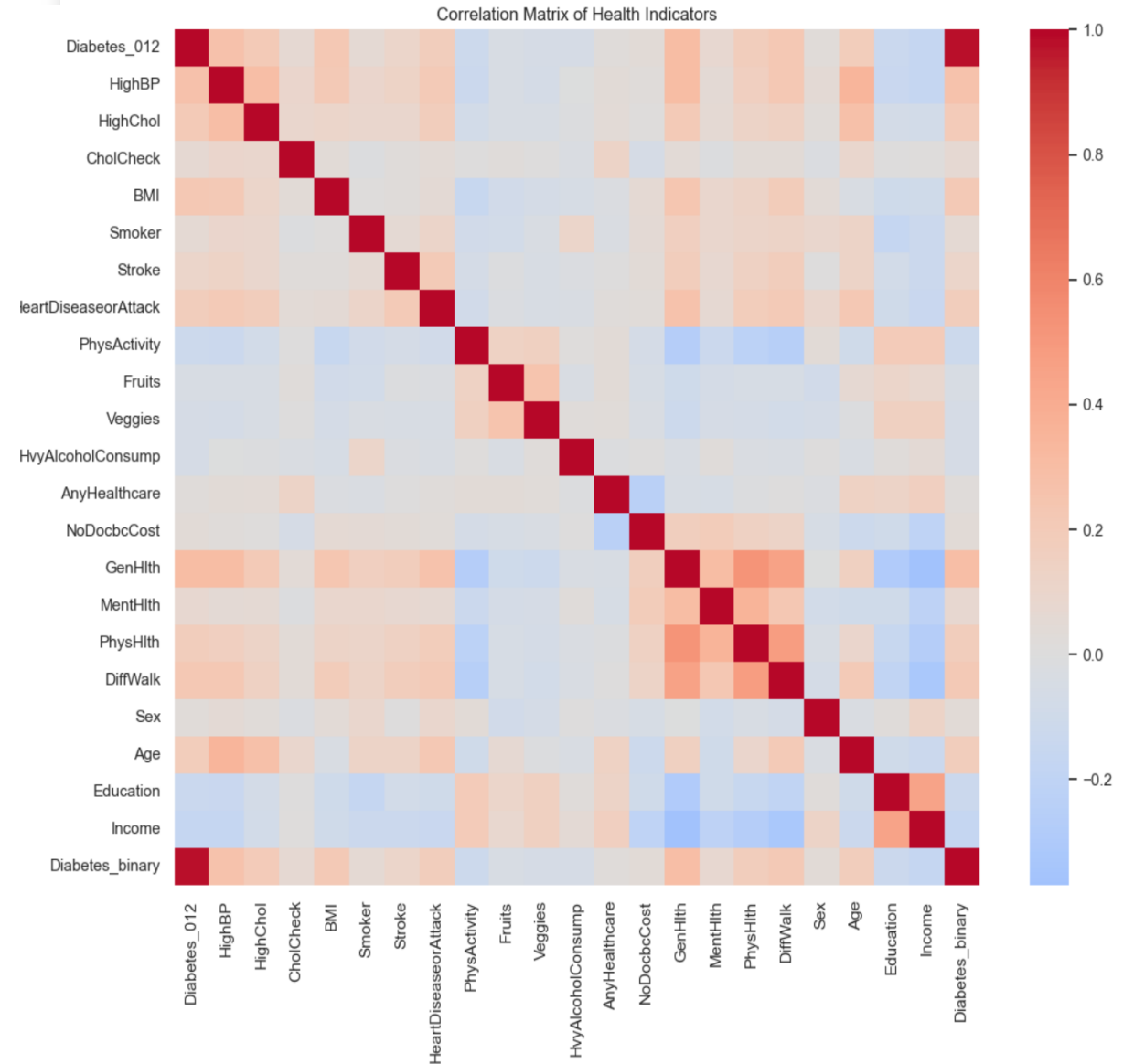
- Older individuals show significantly higher diabetes prevalence.



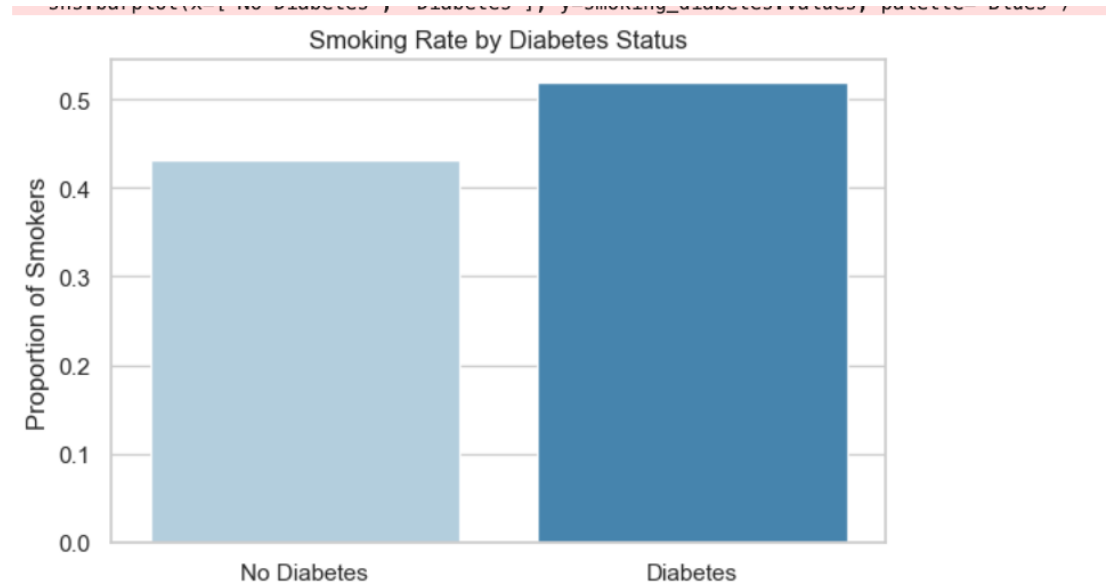
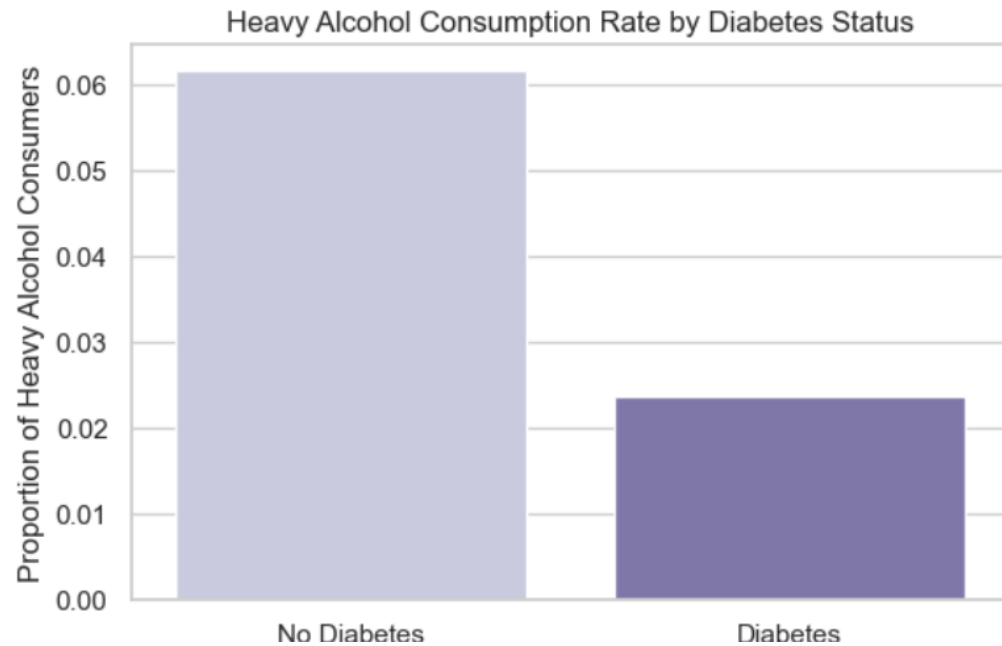
Heatmap

BMI, cholesterol, and blood pressure positively correlate with diabetes

Correlation Between Indicators



Lifestyle Factors and Diabetes



- Smokers and physically inactive individuals have higher diabetes rates.
- Alcohol consumption relationship is less clear in this dataset.