

Title: Healthcare Data

Exploration – Visualizing Patient
Data to Identify Health Trends

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Introduction

Healthcare data plays a crucial role in understanding patient health trends and making informed medical decisions. This report explores patient data, including blood pressure, sugar levels, and weight, to identify patterns and potential health risks. By leveraging data visualization techniques, we aim to provide insights that can assist healthcare professionals in diagnosing conditions and recommending lifestyle changes.

Methodology

Data Collection

The patient data used in this report was collected from [source, e.g., hospital records, wearable devices, or public datasets]. The dataset includes key health indicators such as:

- Blood Pressure (Systolic/Diastolic)
- Blood Sugar Levels (Fasting/Postprandial)
- Weight (kg/lbs)
- Age and Gender (for demographic analysis)

Data Processing

- 1.Data Cleaning: Removing inconsistencies, missing values, and errors.
 - 2.Normalization: Standardizing values for better comparison.
 - 3.Data Visualization: Utilizing Python libraries such as Matplotlib and Seaborn to generate meaningful visualizations.
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CODE TYPED

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

# Load the dataset
data = pd.read_csv('patient_health_data.csv')

# Visualizing Blood Pressure Trends
plt.figure(figsize=(10,5))
sns.lineplot(data=data, x='Date', y='BloodPressure',
hue='PatientID')
plt.title('Blood Pressure Trends Over Time')
plt.xlabel('Date')
plt.ylabel('Blood Pressure (mmHg)')
plt.show()

# Visualizing Blood Sugar Levels
plt.figure(figsize=(10,5))
sns.boxplot(x='AgeGroup', y='BloodSugar', data=data)
plt.title('Blood Sugar Levels by Age Group')
plt.xlabel('Age Group')
plt.ylabel('Blood Sugar Level (mg/dL)') plt.show() */
```

Screenshots Output

