DIABETES DATA ANALYSIS – POWER BI DASHBOARD

1. Project Overview

This project focuses on analysing diabetes-related health data using Power BI. The dashboard presents key medical indicators such as glucose levels, BMI, insulin levels, pregnancies, blood pressure, skin thickness, and diabetes pedigree values.

The visualizations help identify trends, patterns, and correlations that may indicate diabetes risk. The purpose is to support data-driven healthcare decision-making and detect risk factors more effectively.

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2. Tools & Technology Used

- **Microsoft Power BI Desktop**
- **CSV dataset**
- **Data modelling & transformation**
- **Data visualization**
- **DAX calculations**

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3. Dataset Details

The dataset contains patient health records with the following fields:

Column	Description
Age	Age of the patient
Pregnancies	Number of pregnancies
Glucose	Glucose level
Risk %	Risk percentage based on medical values
BloodPressure (mg/dL)	Blood pressure measurement
SkinThickness	Skin thickness measurement
Insulin	Insulin level
BMI	Body Mass Index
DiabetesPedigreeFunction	Family history-related risk

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4. Dashboard Insights

The dashboard highlights:

- Clear correlation between high glucose levels and increased diabetes risk
- Higher BMI values show increased risk percentage
- Patients with elevated insulin levels display stronger diabetes indicators
- Pregnancies and age show a compounding relationship on risk levels
- Risk % can be tracked across population segments for early detection

The dashboard provides a structured view for clinicians, analysts, and researchers.

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5. Report Visuals

The dashboard includes:

- Bar charts
- Scatter plots
- Cards
- Slicers
- Trend charts
- Risk distribution visuals

Screenshots are attached to showcase the layout and interactivity.

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6. Objective of the Dashboard

- Identify high-risk patients
- Study relationships between medical indicators
- Support predictive analysis
- Improve early diagnosis
- Communicate health patterns visually

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7. Value of Analysis

This analysis can help:

✓ Hospitals monitor large patient datasets
✓ Researchers analyse health patterns

✓ Doctors detect patients at early risk
✓ Healthcare decision-making become data-driven

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8. Key Learnings

Through this project, I gained practical experience in:

- Power BI data modelling
- Dataset cleaning and transformation
- Data visualization techniques
- Analytical storytelling
- Medical data understanding

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9. Repository Link

Dashboard + dataset + visuals are available at:

📎 **GitHub Repository:**
https://github.com/nandinidbharadwaj/Diabetes-Analysis-PowerBI

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10. About the Author

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