Stroke Risk Analysis – Power BI Case Study

Objective
Analyze healthcare data to identify key stroke risk factors and support preventive healthcare decision-making using Power BI.

Dataset
Patient-level demographic, lifestyle, and clinical data including age, gender, BMI, glucose level, hypertension, heart disease, smoking status, residence type, and stroke outcome.

Approach
• Cleaned and transformed data in Power Query
• Converted binary indicators into readable categories
• Imputed missing BMI values using the median
• Created DAX measures for stroke rate, stroke cases, and age analysis
• Designed two dashboards: Executive Overview and Risk Factor Analysis

Key Insights
• Stroke risk increases significantly after age 55
• Hypertension and heart disease are major risk drivers
• Stroke likelihood rises when BMI exceeds ~23.7
• Higher glucose levels correlate with increased stroke cases
• Lifestyle factors such as smoking contribute to long-term risk

Tools
Power BI, Power Query, DAX