

List of DAX Measures and Columns Created for Analysis

1. Age Range:

Description: This DAX query creates a column with age ranges based on the 'age' column in the dataset.

Purpose: It categorizes individuals into age groups, making it easier to analyze and visualize data based on different age ranges.

```
Age Range = IF( ROUND('dataset_with_probabilities'[age], -1) < 10, "0-10", IF(
ROUND('dataset_with_probabilities'[age], -1) < 20, "10-20", IF(
ROUND('dataset_with_probabilities'[age], -1) < 30, "20-30", IF(
ROUND('dataset_with_probabilities'[age], -1) < 40, "30-40", IF(
ROUND('dataset_with_probabilities'[age], -1) < 50, "40-50", IF(
ROUND('dataset_with_probabilities'[age], -1) < 60, "50-60", IF(
ROUND('dataset_with_probabilities'[age], -1) < 70, "60-70", IF(
ROUND('dataset_with_probabilities'[age], -1) < 80, "70-80", "80+" ) ) ) ) ) ) ) ) ) ) )
```

2. BMI Category:

Description: This DAX query creates a column that categorizes individuals based on their Adjusted BMI (Body Mass Index) into groups like Underweight, Normal Weight, Overweight, and Obese.

Purpose: It helps in classifying individuals according to their BMI, providing insights into the distribution of weight categories within the dataset.

```
BMI Category = IF('dataset_with_probabilities'[Adjusted BMI] < 18.5, "Underweight",
IF('dataset_with_probabilities'[Adjusted BMI] >= 18.5 &&
'dataset_with_probabilities'[Adjusted BMI] < 25, "Normal Weight",
IF('dataset_with_probabilities'[Adjusted BMI] >= 25 &&
'dataset_with_probabilities'[Adjusted BMI] < 30, "Overweight", "Obese" ) ) )
```

3. Glucose Level Range:

Description: This DAX query creates a column that categorizes individuals based on their blood glucose level into specific ranges.

Purpose: It helps in analyzing and visualizing data based on different blood glucose level ranges, allowing for insights into glucose level distribution.

```
Glucose Level Range = IF( 'dataset_with_probabilities'[blood_glucose_level] >= 80 &&
'dataset_with_probabilities'[blood_glucose_level] < 100, "80-100", IF(
'dataset_with_probabilities'[blood_glucose_level] >= 100 &&
'dataset_with_probabilities'[blood_glucose_level] < 150, "100-150", IF(
'dataset_with_probabilities'[blood_glucose_level] >= 150 &&
'dataset_with_probabilities'[blood_glucose_level] < 200, "150-200", IF(
'dataset_with_probabilities'[blood_glucose_level] >= 200 &&
'dataset_with_probabilities'[blood_glucose_level] < 250, "200-250", IF(
'dataset_with_probabilities'[blood_glucose_level] >= 250 &&
'dataset_with_probabilities'[blood_glucose_level] <= 300, "250-300", "Unknown" ) ) ) ) )
```

4. Glucose Category:

Description: This DAX query creates a column that categorizes individuals into Diabetic, Pre-Diabetic, Normal, or Unknown based on their blood glucose level.

Purpose: It simplifies the classification of individuals according to their glucose levels, aiding in the analysis of diabetes-related patterns.

```
Glucose_Category = SWITCH( TRUE(), 'dataset_with_probabilities'[blood_glucose_level]
>= 126, "Diabetic", 'dataset_with_probabilities'[blood_glucose_level] >= 100, "Pre-
Diabetic", 'dataset_with_probabilities'[blood_glucose_level] >= 80, "Normal", "Unknown" )
```

5. HbA1c Category:

Description: This DAX query creates a column that categorizes individuals into High Risk, Moderate Risk, Low Risk, or Unknown based on their HbA1c level.

Purpose: It classifies individuals according to their HbA1c levels, which is crucial for assessing the risk of diabetes.

```
HbA1c_Category = SWITCH( TRUE(), 'dataset_with_probabilities'[HbA1c_level] >= 6.5,
"High Risk", 'dataset_with_probabilities'[HbA1c_level] >= 5.7, "Moderate Risk",
'dataset_with_probabilities'[HbA1c_level] >= 4.0, "Low Risk", "Unknown" )
```

6. Total_Diabetic, Total_Normal, Total_Pre-Diabetic:

Description: These DAX measures count the number of individuals falling into different glucose categories—Diabetic, Normal, and Pre-Diabetic.

Purpose: These measures provide a count of individuals in each category, facilitating the analysis of the distribution of diabetes-related conditions.

```
Total_Diabetic = COUNTROWS(FILTER('dataset_with_probabilities',  
'dataset_with_probabilities'[Glucose_Category] = "Diabetic")) Total_Normal =  
COUNTROWS(FILTER('dataset_with_probabilities',  
'dataset_with_probabilities'[Glucose_Category] = "Normal")) Total_Pre-Diabetic =  
COUNTROWS(FILTER('dataset_with_probabilities',  
'dataset_with_probabilities'[Glucose_Category] = "Pre-Diabetic"))
```

7. Adjusted BMI:

Description: This DAX query creates a column that calculates the average BMI within the dataset, considering only BMI values below 40.

Purpose: It computes a modified average BMI, excluding extreme values, to provide a more representative measure of the dataset.

```
Adjusted BMI = IF('Dataset'[bmi] > 40, AVERAGEX(ALL('Dataset'[bmi]), 'Dataset'[bmi]),  
'Dataset'[bmi])
```

These DAX measures and columns contribute to creating a comprehensive analysis of diabetes-related factors, including age, BMI, glucose levels, and HbA1c levels. They help in creating visualizations and dashboards to gain insights into the distribution of these factors within the dataset.