

PROJECTDEVELOPMENT PHASE

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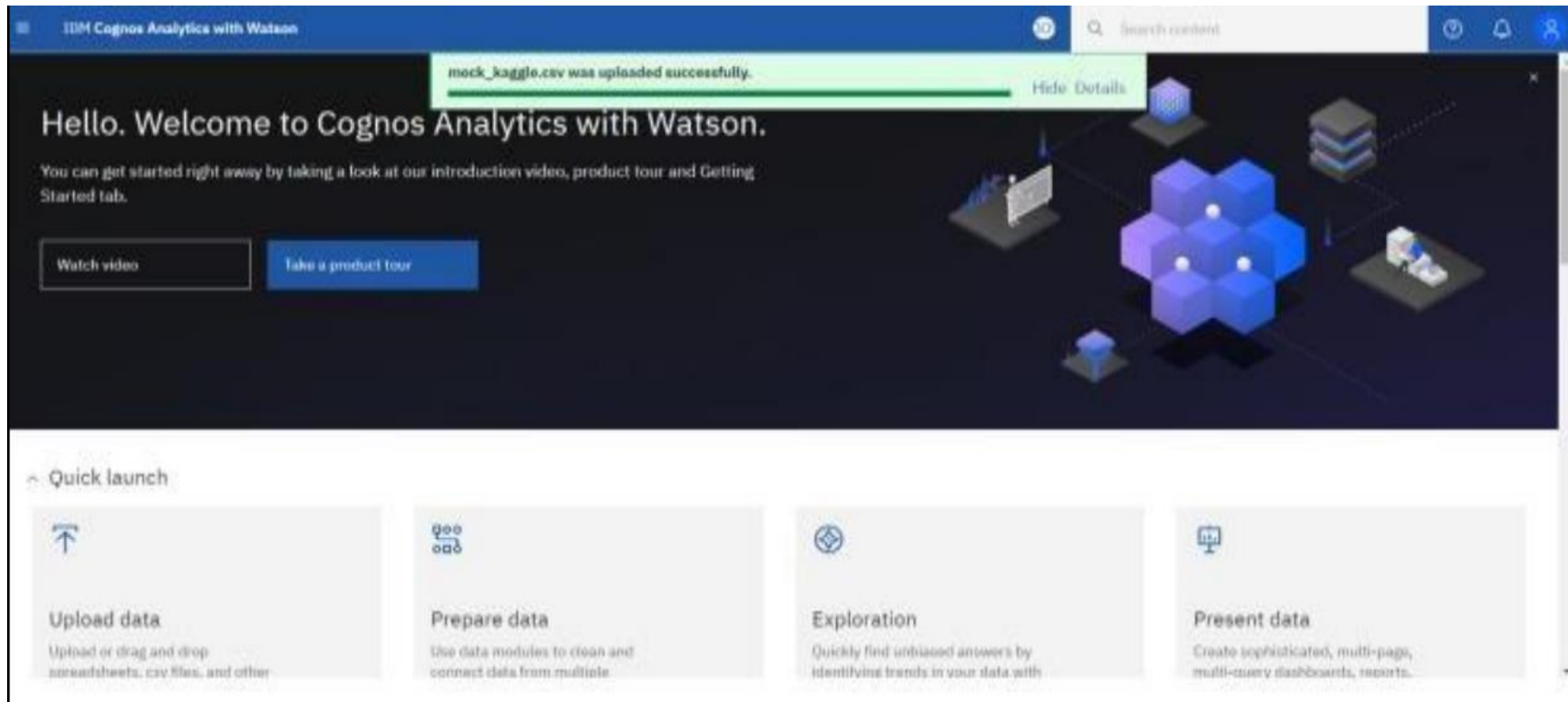
Date	29 October 2022
Team ID	PNT2022TMID11921
Project Name	Project - Visualizing and Predicting Heart Diseases with an Interactive Dashboard

Sprint 1	Data Collection Data Preparation
Sprint 2	Data Exploration
Sprint 3	Dashboard Creation
Sprint 4	Report Creation Story Creation

Dataset Collection

i) **DOWNLOADING DATASET:** Dataset link : heart-disease-prediction dataset

ii) **UPLOADING DATASET:**



DATA PREPARATION

Prepare the Dataset

IBM Cognos Analytics with Watson

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Grid

Relationships

Custom tables

↑↓	Row Id	Age	Sex	Chest pain type	BP	Cholesterol
	1	70	1	4	130	322
	2	67	0	3	115	564
	3	57	1	2	124	261
	4	64	1	4	128	263
	5	74	0	2	120	269
	6	65	1	4	120	177
	7	56	1	3	130	256
	8	59	1	4	110	239
	9	60	1	4	140	293
	10	63	0	4	150	407

Data module

Search

Age

Sex

Chest pain type

BP

Cholesterol

FBS over 120

EKG results

Max HR

Exercise angina

ST depression

Slope of ST

Number of...ls fluro

Thallium

DATA PREPARATION

AGE :

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Properties

Data module

🔍 Search

📄 Age

📄 Sex

📄 Chest pain type

📄 BP

📄 Cholesterol

📄 FBS over 120

📄 EKG results

📄 Max HR

📄 Exercise angina

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📄 Slope of ST

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📄 Thallium

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7	56	1	3	130	256	
8	59	1	4	110	239	
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10	63	0	4	150	407	

DATA PREPARATION

GENDER:

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Properties

Data module

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📄 Age

📄 Sex

📄 Chest pain type

📄 BP

📄 Cholesterol

📄 FBS over 120

📄 EKG results

📄 Max HR

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📄 Slope of ST

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📄 Thallium

📄 Heart Disease

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10	63	0	4	150	407	

DATA PREPARATION

CHEST PAIN TYPE :

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Grid

Relationships

Custom tables

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Data module

Search

Age

Sex

Chest pain type

BP

Cholesterol

FBS over 120

EKG results

Max HR

Exercise angina

ST depression

Slope of ST

Number of...ls fluro

Thallium

Heart Disease

DATA PREPARATION

BP :

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Data module

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🔍 Search

📄 Age

📄 Sex

📄 Chest pain type

📄 BP

📄 Cholesterol

📄 FBS over 120

📄 EKG results

📄 Max HR

📄 Exercise angina

📄 ST depression

📄 Slope of ST

📄 Number of...ls fluro

📄 Thallium

Grid

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Custom tables

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	2	67	0	3	115	564
	3	57	1	2	124	261
	4	64	1	4	128	263
	5	74	0	2	120	269
	6	65	1	4	120	177
	7	56	1	3	130	256
	8	59	1	4	110	239
	9	60	1	4	140	293
	10	63	0	4	150	407

CHOLESTEROL :

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Properties

Data module

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🔍 Search

📄 Age

📄 Sex

📄 Chest pain type

📄 BP

📄 Cholesterol

📄 FBS over 120

📄 EKG results

📄 Max HR

📄 Exercise angina

📄 ST depression

📄 Slope of ST

📄 Number of...ls fluro

📄 Thallium

📊 Grid

🔗 Relationships

📄 Custom tables

↕	Age	Sex	Chest pain type	BP	Cholesterol	F
	70	1	4	130	322	
	67	0	3	115	564	
	57	1	2	124	261	
	64	1	4	128	263	
	74	0	2	120	269	
	65	1	4	120	177	
	56	1	3	130	256	
	59	1	4	110	239	
	60	1	4	140	293	
	63	0	4	150	407	

DATA PREPARATION

FBS over 120:

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Properties

Data module

Search

Age

Sex

Chest pain type

BP

Cholesterol

FBS over 120

EKG results

Max HR

Exercise angina

ST depression

Slope of ST

Number of...ls fluro

Thallium

	Cholesterol	FBS over 120	EKG results	Max HR	Exercise angina	ST depression
322	0	2	109	0	2.4	
564	0	2	160	0	1.6	
261	0	0	141	0	0.3	
263	0	0	105	1	0.2	
269	0	2	121	1	0.2	
177	0	0	140	0	0.4	
256	1	2	142	1	0.6	
239	0	2	142	1	1.2	
293	0	2	170	0	1.2	
407	0	2	154	0	4	

DATA PREPARATION

EKG Results:

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🔗 Properties

Data module

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🔍 Search

📁 Age

📁 Sex

📁 Chest pain type

📁 BP

📁 Cholesterol

📁 FBS over 120

📁 EKG results

📁 Max HR

📁 Exercise angina

📁 ST depression

📁 Slope of ST

📁 Number of...ls fluro

📁 Thallium

📁 Heart Disease

Grid

Relationships

Custom tables

↑↓	Cholesterol	FBS over 120	EKG results	Max HR	Exercise angina	ST depre
	322	0	2	109	0	2.4
	564	0	2	160	0	1.6
	261	0	0	141	0	0.3
	263	0	0	105	1	0.2
	269	0	2	121	1	0.2
	177	0	0	140	0	0.4
	256	1	2	142	1	0.6
	239	0	2	142	1	1.2
	293	0	2	170	0	1.2
	407	0	2	154	0	4

DATA PREPARATION

MAX HR :

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Data module

🔍 Search

📄 Age

📄 Sex

📄 Chest pain type

📄 BP

📄 Cholesterol

📄 FBS over 120

📄 EKG results

📄 Max HR

📄 Exercise angina

📄 ST depression

📄 Slope of ST

📄 Number of...ls fluro

📄 Thallium

Grid

Relationships

Custom tables

↑↓	Cholesterol	FBS over 120	EKG results	Max HR	Exercise angina	ST depr
	322	0	2	109	0	2.4
	564	0	2	160	0	1.6
	261	0	0	141	0	0.3
	263	0	0	105	1	0.2
	269	0	2	121	1	0.2
	177	0	0	140	0	0.4
	256	1	2	142	1	0.6
	239	0	2	142	1	1.2
	293	0	2	170	0	1.2
	407	0	2	154	0	4

DATA PREPARATION

EXERCISE ANGINA:

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🔍 Search

Row Id

📄 Age

📄 Sex

📄 Chest pain type

📄 BP

📄 Cholesterol

📄 FBS over 120

📄 EKG results

📄 Max HR

📄 Exercise angina

📄 ST depression

📄 Slope of ST

📄 Number of...ls fluoro

📄 Thallium

▶ abc Heart Disease

Grid

Relationships

Custom tables

↕	EKG results	Max HR	Exercise angina	ST depression	Slope of ST	Number of vessels
2	109	0	2.4	2	3	
2	160	0	1.6	2	0	
0	141	0	0.3	1	0	
0	105	1	0.2	2	1	
2	121	1	0.2	1	1	
0	140	0	0.4	1	0	
2	142	1	0.6	2	1	
2	142	1	1.2	2	1	
2	170	0	1.2	2	2	
2	154	0	4	2	3	
0	161	0	0.5	2	0	

DATA PREPARATION

ST Depression :

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📄 Age

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📄 Chest pain type

📄 BP

📄 Cholesterol

📄 FBS over 120

📄 EKG results

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📄 Slope of ST

📄 Number of...ls fluro

📄 Thallium

▶ abc Heart Disease

Grid

Relationships

Custom tables

↑↓	rol	FBS over 120	EKG results	Max HR	Exercise angina	ST depression	S
		0	2	109	0	2.4	
		0	2	160	0	1.6	
		0	0	141	0	0.3	
		0	0	105	1	0.2	
		0	2	121	1	0.2	
		0	0	140	0	0.4	
		1	2	142	1	0.6	
		0	2	142	1	1.2	
		0	2	170	0	1.2	
		0	2	154	0	4	

DATA PREPARATION Slope of ST :

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Data module

Search

Age

Sex

Chest pain type

BP

Cholesterol

FBS over 120

EKG results

Max HR

Exercise angina

ST depression

Slope of ST

Number of...ls fluoro

Thallium

abc Heart Disease

Grid

Relationships

Custom tables

angina	ST depression	Slope of ST	Number of vessels fluoro	Thallium	Heart Disease
	2.4	2	3	3	Presence
	1.6	2	0	7	Absence
	0.3	1	0	7	Presence
	0.2	2	1	7	Absence
	0.2	1	1	3	Absence
	0.4	1	0	7	Absence
	0.6	2	1	6	Presence
	1.2	2	1	7	Presence
	1.2	2	2	7	Presence
	4	2	3	7	Presence

DATA PREPARATION No Of Vessels Fluro :

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Age

Sex

Chest pain type

BP

Cholesterol

FBS over 120

EKG results

Max HR

Exercise angina

ST depression

Slope of ST

Number of vessels fluro

Thallium

Heart Disease

Grid Relationships Custom tables

↑↓ : angina	ST depression	Slope of ST	Number of vessels fluro	Thallium	Heart Disease
	2.4	2	3	3	Presence
	1.6	2	0	7	Absence
	0.3	1	0	7	Presence
	0.2	2	1	7	Absence
	0.2	1	1	3	Absence
	0.4	1	0	7	Absence
	0.6	2	1	6	Presence
	1.2	2	1	7	Presence
	1.2	2	2	7	Presence
	4	2	3	7	Presence

DATA PREPARATION Heart Disease :

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Properties

Data module

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🔍 Search

📄 Age

📄 Sex

📄 Chest pain type

📄 BP

📄 Cholesterol

📄 FBS over 120

📄 EKG results

📄 Max HR

📄 Exercise angina

📄 ST depression

📄 Slope of ST

📄 Number of...ls fluro

📄 Thallium

abc Heart Disease

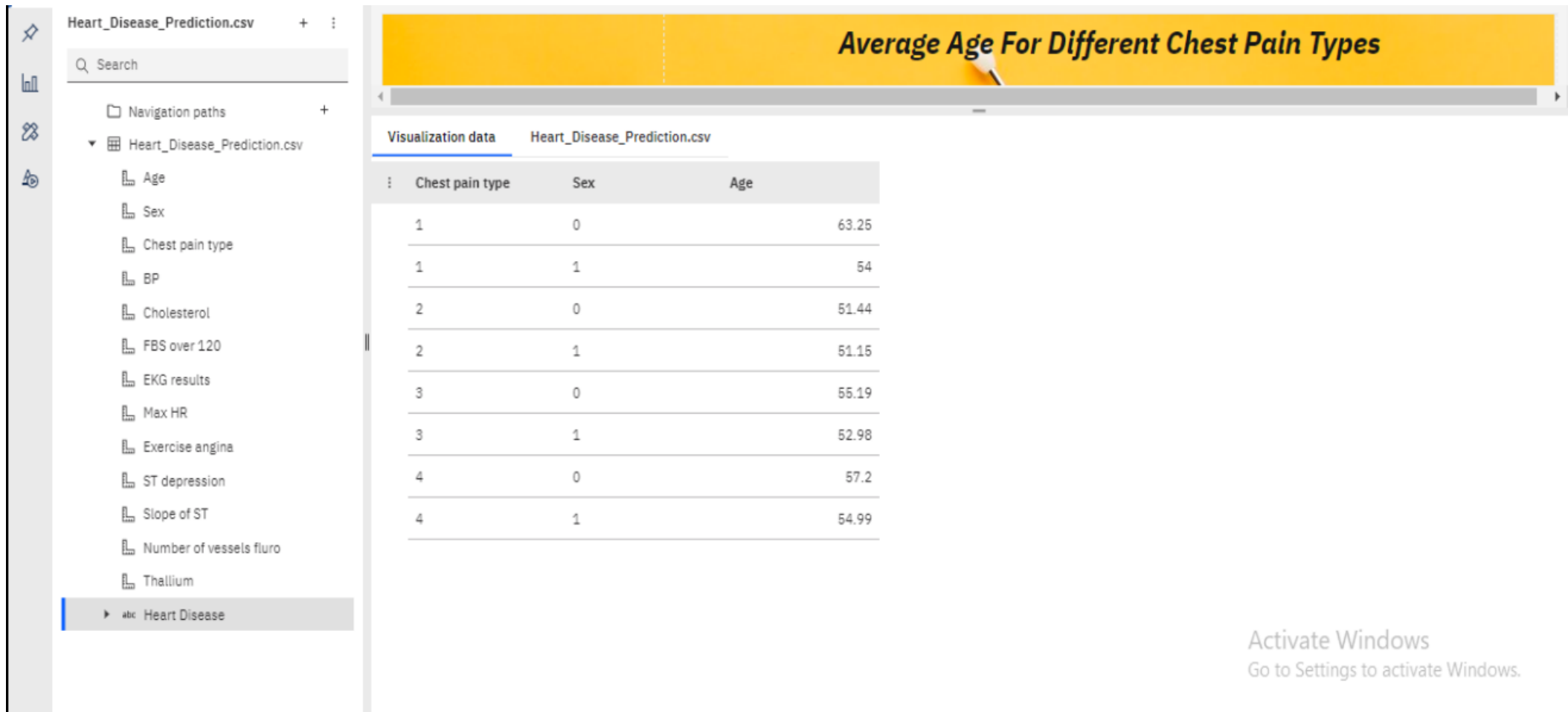
Grid

Relationships

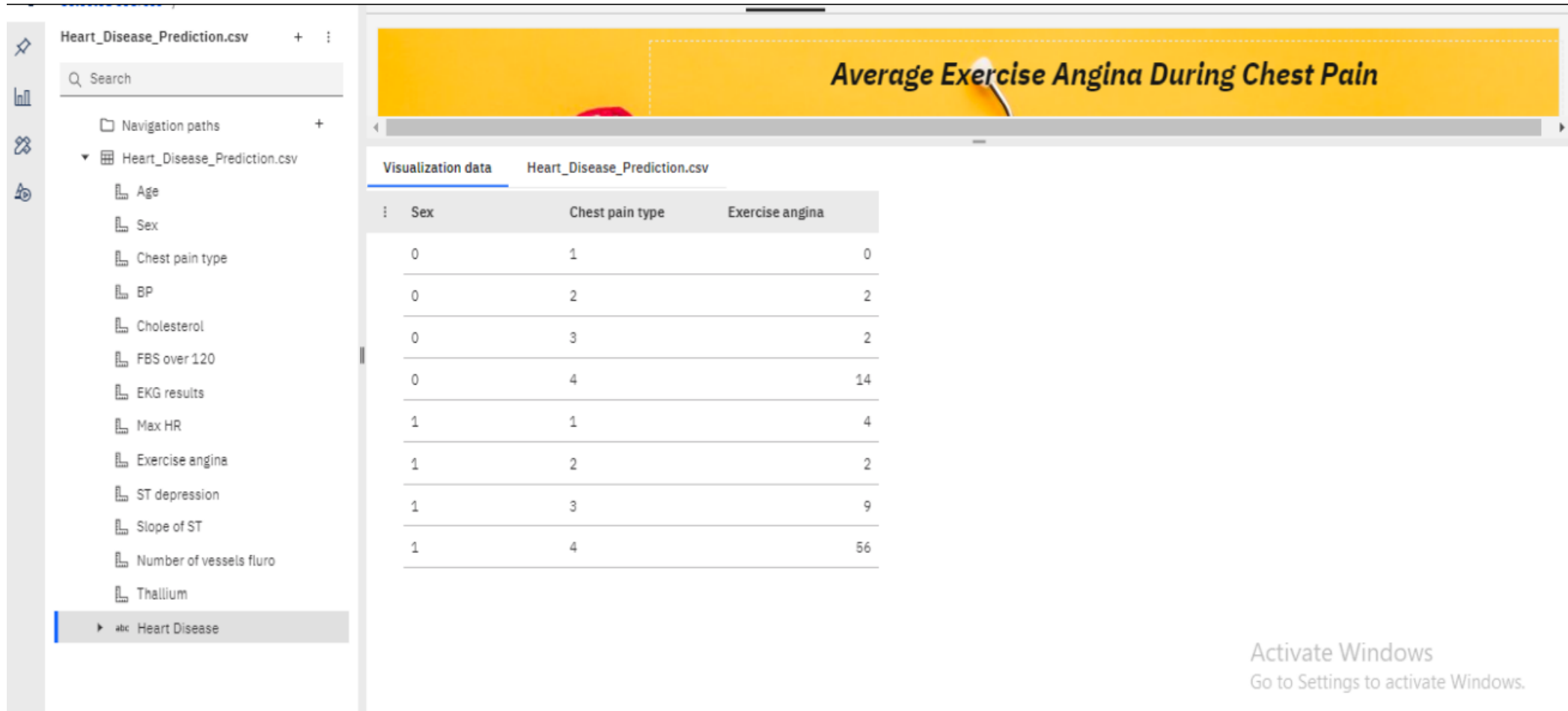
Custom tables

↕	angina	ST depression	Slope of ST	Number of vessels fluro	Thallium	Heart Disease
		2.4	2	3	3	Presence
		1.6	2	0	7	Absence
		0.3	1	0	7	Presence
		0.2	2	1	7	Absence
		0.2	1	1	3	Absence
		0.4	1	0	7	Absence
		0.6	2	1	6	Presence
		1.2	2	1	7	Presence
		1.2	2	2	7	Presence
		4	2	3	7	Presence

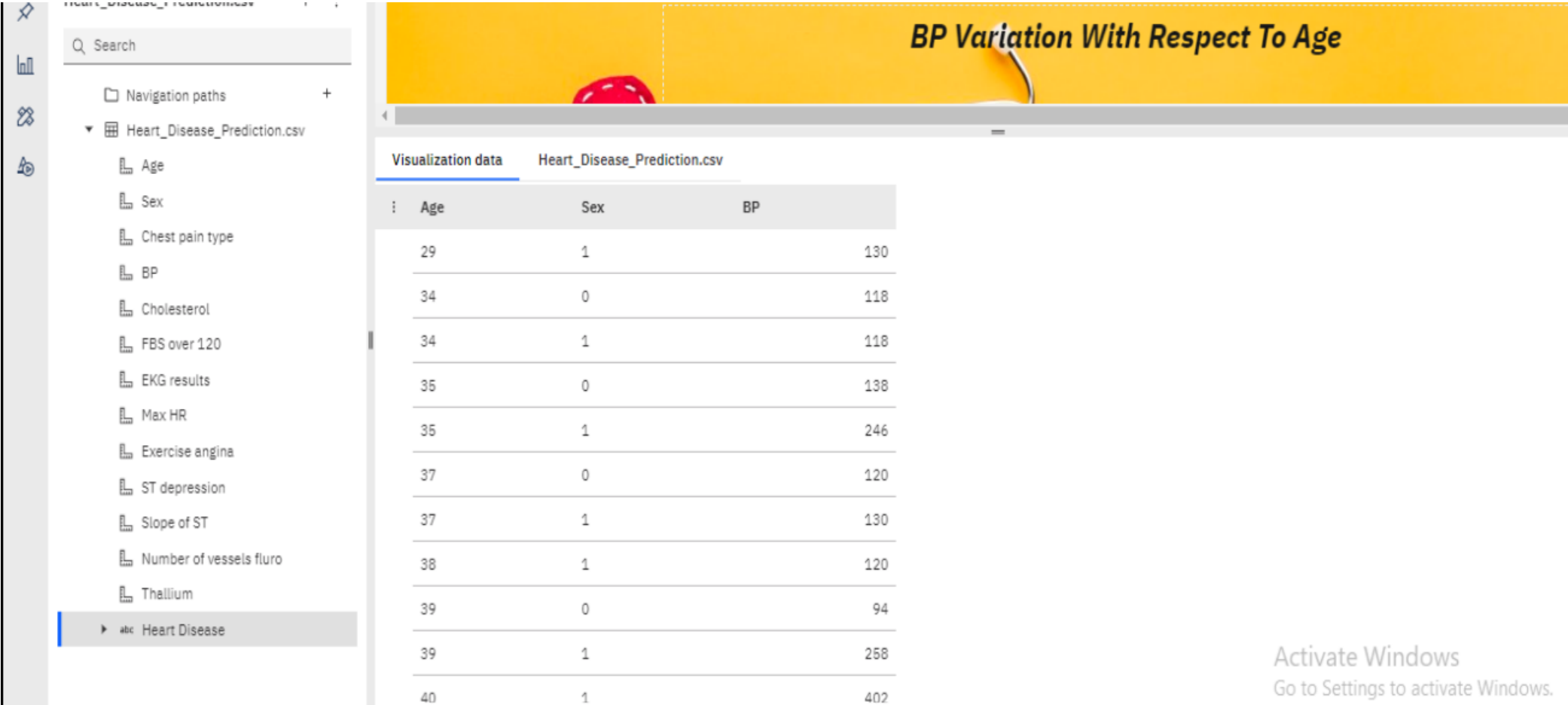
DATA PREPARATION Average age for different chest pain :



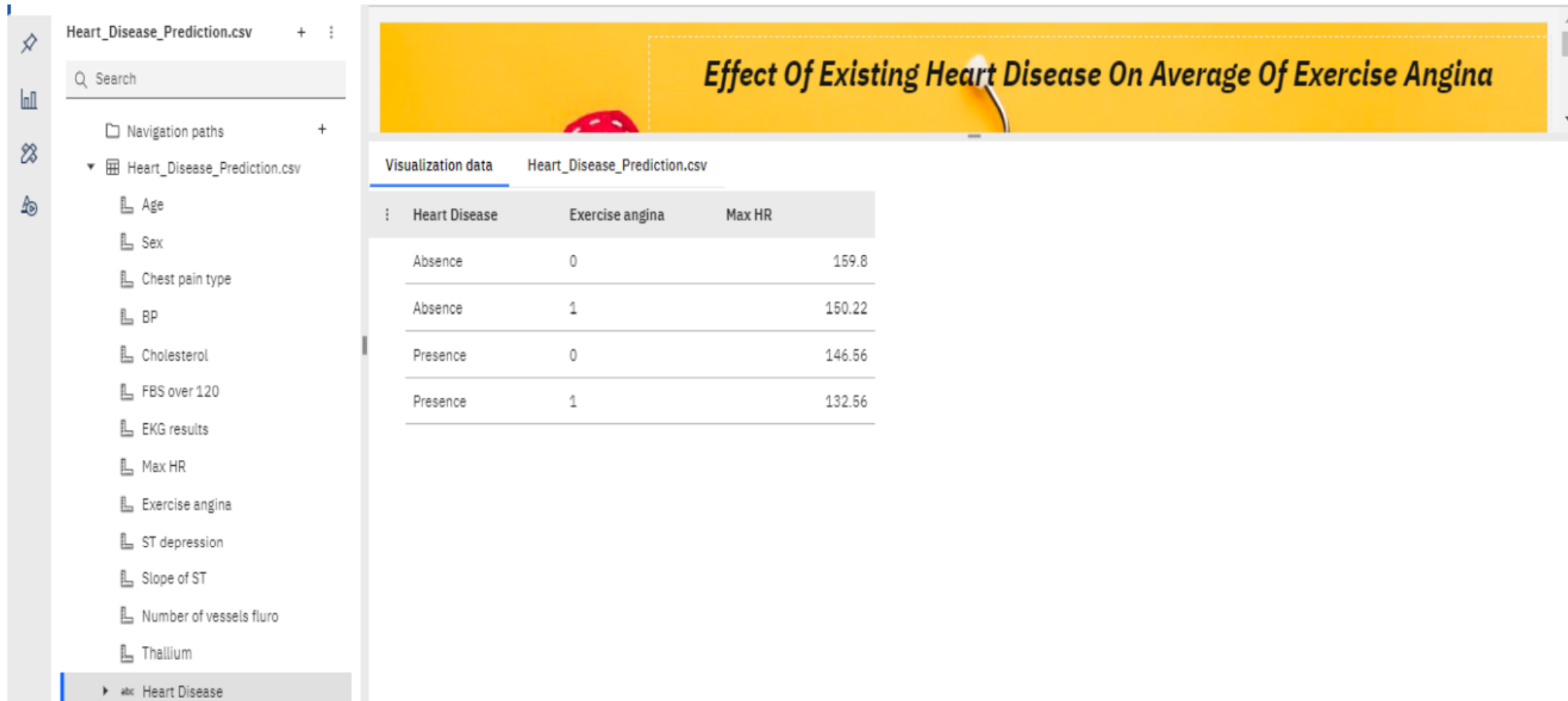
DATA PREPARATION Average Exercise Angina During Chest Pain :



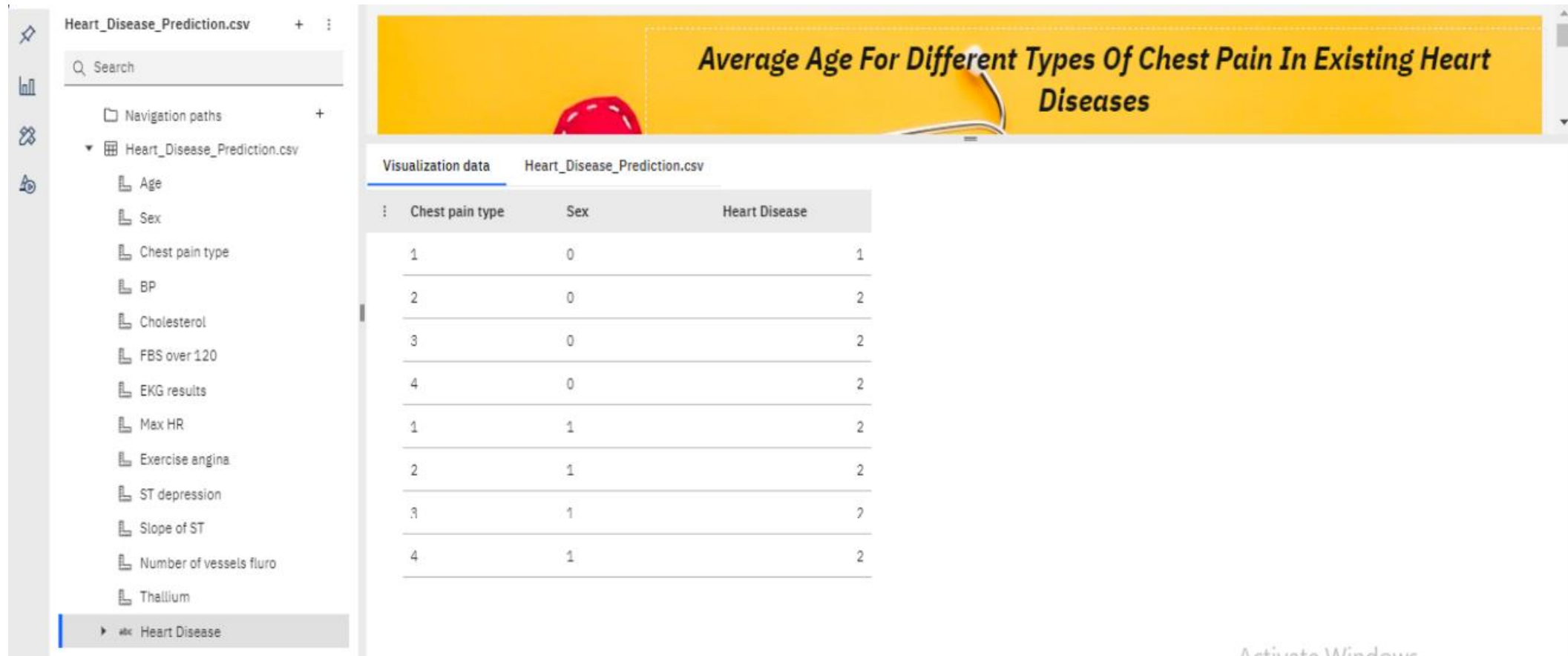
DATA PREPARATION BP Variation with respect to Age



DATA PREPARATION Effect of Existing Heart disease on Average of Exercise Angina :



DATA PREPARATION Average Age for Different types of Chest pain in Existing Heart Disease:

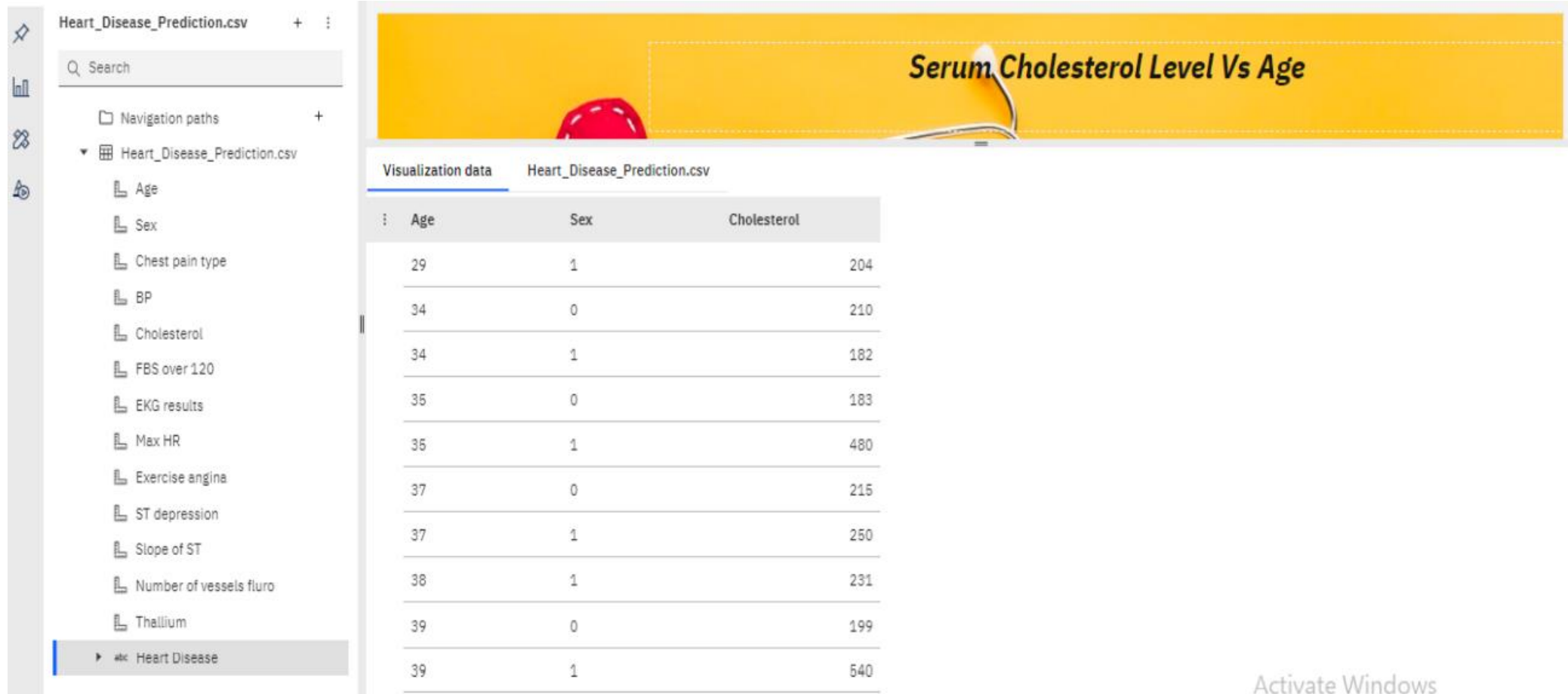


The screenshot shows a data visualization interface. On the left is a sidebar with a search bar and a list of fields: Age, Sex, Chest pain type, BP, Cholesterol, FBS over 120, EKG results, Max HR, Exercise angina, ST depression, Slope of ST, Number of vessels fluoro, and Thallium. The 'Heart Disease' field is selected. The main area has a yellow header with the title 'Average Age For Different Types Of Chest Pain In Existing Heart Diseases'. Below the header is a table with the title 'Visualization data Heart_Disease_Prediction.csv'. The table has three columns: 'Chest pain type', 'Sex', and 'Heart Disease'. It contains 8 rows of data.

Chest pain type	Sex	Heart Disease
1	0	1
2	0	2
3	0	2
4	0	2
1	1	2
2	1	2
3	1	2
4	1	2

Activate Windows

DATA PREPARATION Serum Cholesterol level Vs Age



DATA PREPARATION Max HR in Existing Heart disease by Exercise Angina:

