

app

Get Code

Hyperparameter Tuning

## Controls

# ⌚ AutoML – EDA + Clean + SHAP + Robust Engines (Option A)

Upload CSV dataset



Drag and drop file here

Limit 200MB per file • CSV

[Browse files](#)



heart.csv 11.1KB



Dataset loaded

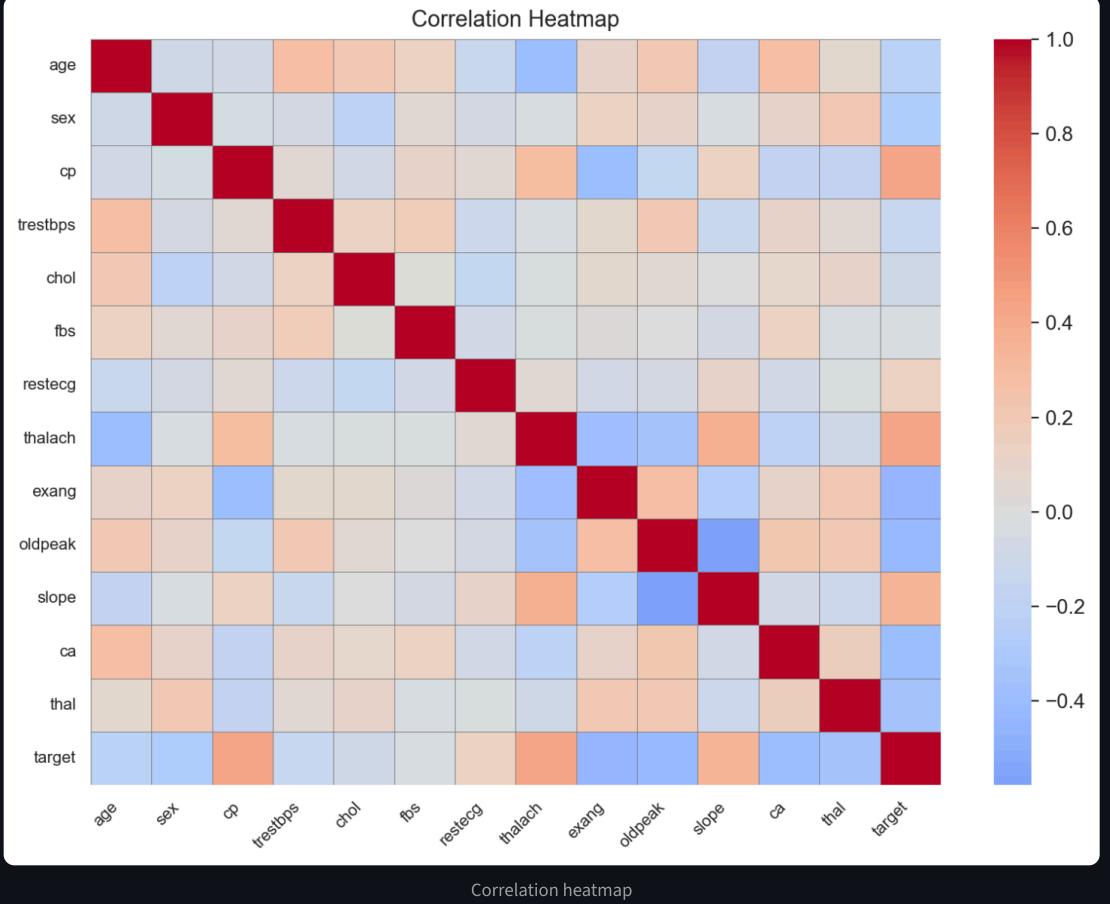
	age	sex	cp	trestbps	chol	fbps	restecg	thalach	exang	oldpeak	slop
0	63	1	3	145	233	1	0	150	0	2.3	
1	37	1	2	130	250	0	1	187	0	3.5	
2	41	0	1	130	204	0	0	172	0	1.4	
3	56	1	1	120	236	0	1	178	0	0.8	
4	57	0	0	120	354	0	1	163	1	0.6	

## ⌚ Quick EDA Summary

- Rows: 303, Columns: 14

## Missing Values (top)

	dtype	missing_count	missing_pc
missing_count	unknown	0	0
missing_pct	unknown	0	0



## 2. Target, Task & Auto-clean

### Target & Task Type

Select target column

target

Task Type

Binary Classification

## Auto-clean & options

Auto-clean (drop high-missing cols + impute)

Drop columns with missing ratio above:



Numeric fill strategy

mean



Categorical fill strategy

most\_frequent



## Feature Engineering Options

Fix rare categories (< 5% freq)

Handle outliers (IQR clipping)

Create numeric interaction features

Apply SMOTE on training set (if needed)

## ⚠ Data issues detected

- Target cardinality: 2
- 1 duplicate rows found

## ✍ Detailed Auto-Clean Summary

Rows: 303 → 303 (0 rows dropped)

Columns: 14 → 14 (0 columns dropped)

No rows dropped due to missing target.

No columns dropped due to missing-value threshold.

Removed duplicate rows: 1

All missing values handled successfully.

✨ Feature Engineering applied successfully!

## ✍ Cleaned dataset summary

- Rows: 303, Columns: 14 (no detailed before/after info from cleaner).

🚀 Train models (cleaned dataset)

### 3. Model Evaluation & Explainability

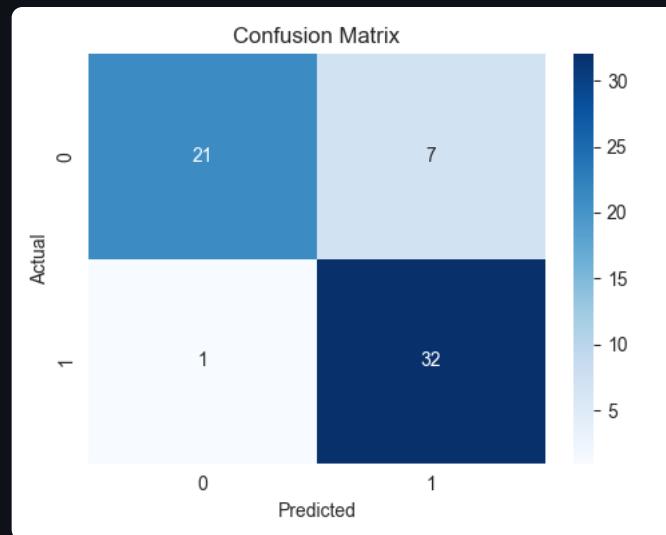
Choose model

GaussianNB

[Get Code for This Model](#)

#### 📈 Classification Metrics (on TEST set)

- Accuracy: 0.8689
- Precision (weighted): 0.8820
- Recall (weighted): 0.8689
- F1 (weighted): 0.8664



ROC/PR not available: Error opening 'reports/GaussianNB\_roc\_test.png'

Feature importance not available for this model.

#### 🏆 Leaderboard (test scores)

Could not render leaderboard (mixed types?)

#### 🧪 Manual prediction

age

42

sex

1

cp

3

trestbps

145

chol

233

fbs

1

restecg

0

thalach

150

exang

0

oldpeak

2.3

slope

0

ca

0

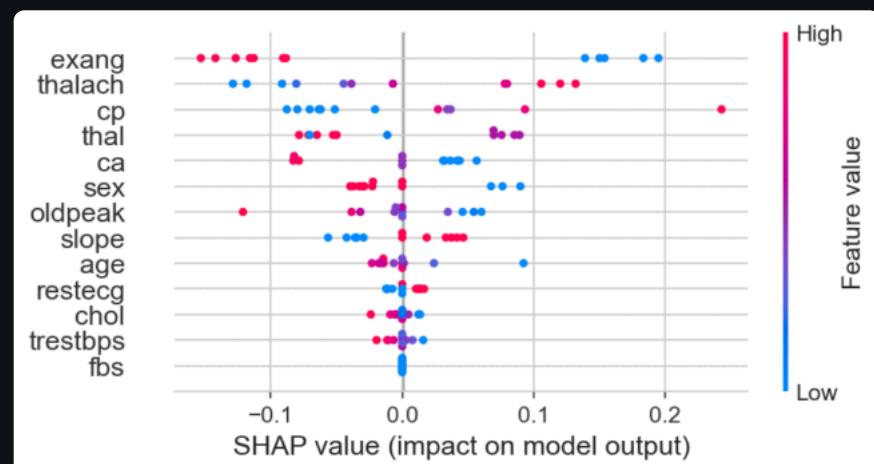
thal

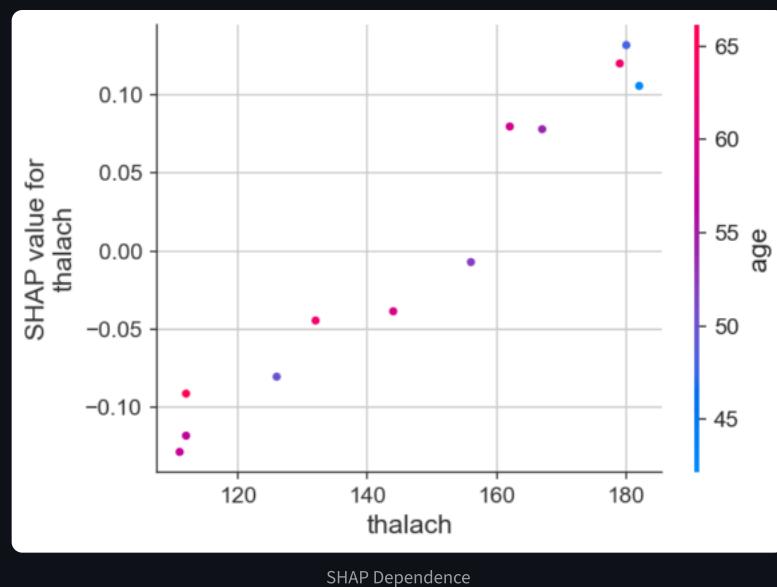
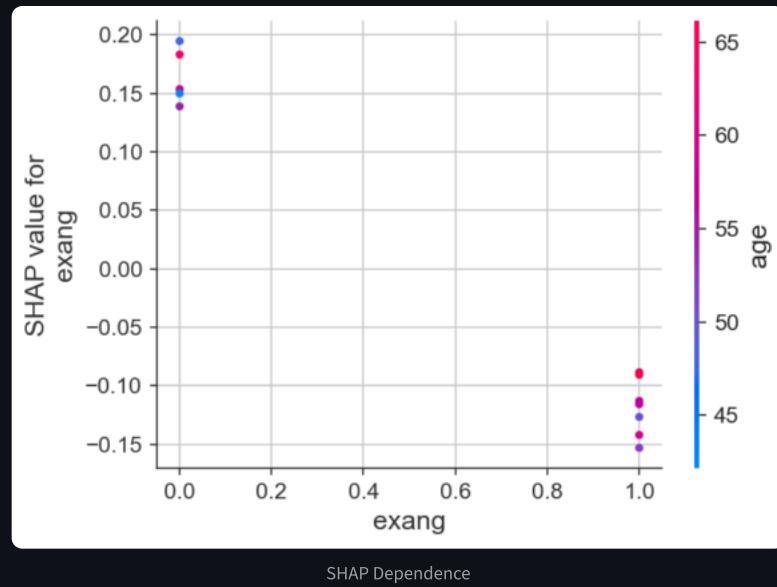
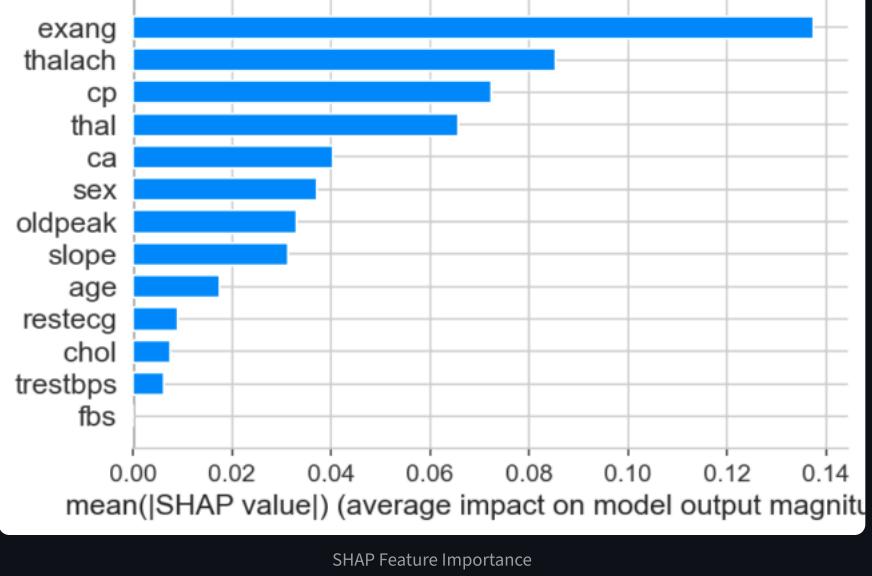
1

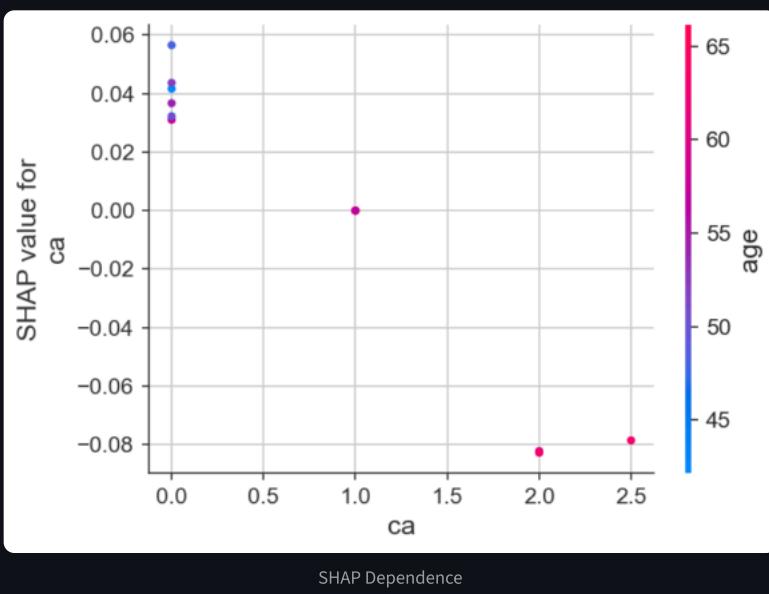
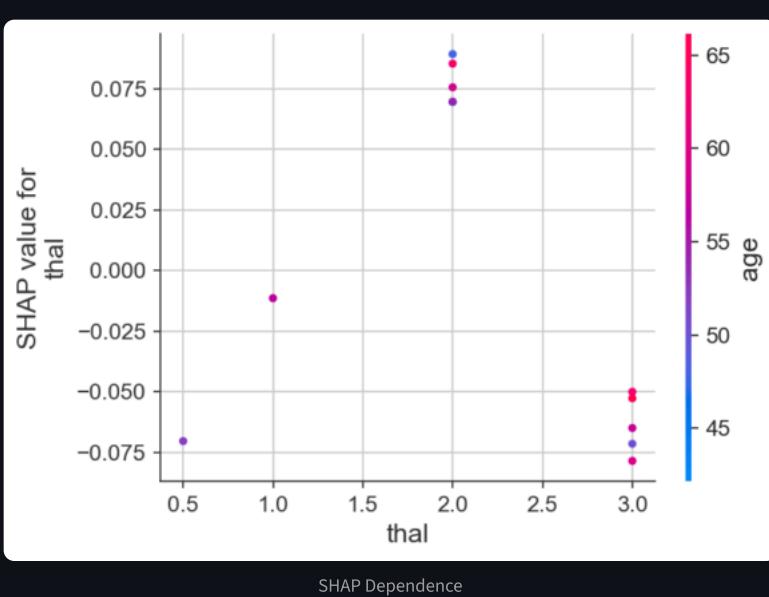
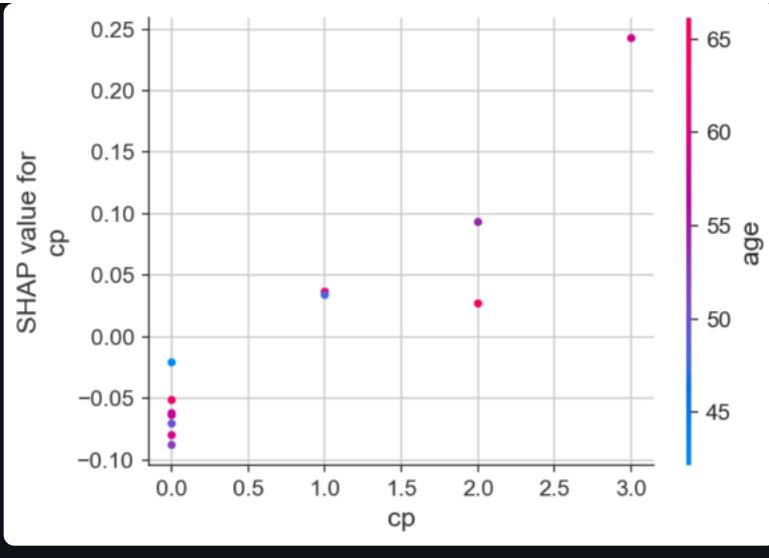
Predict

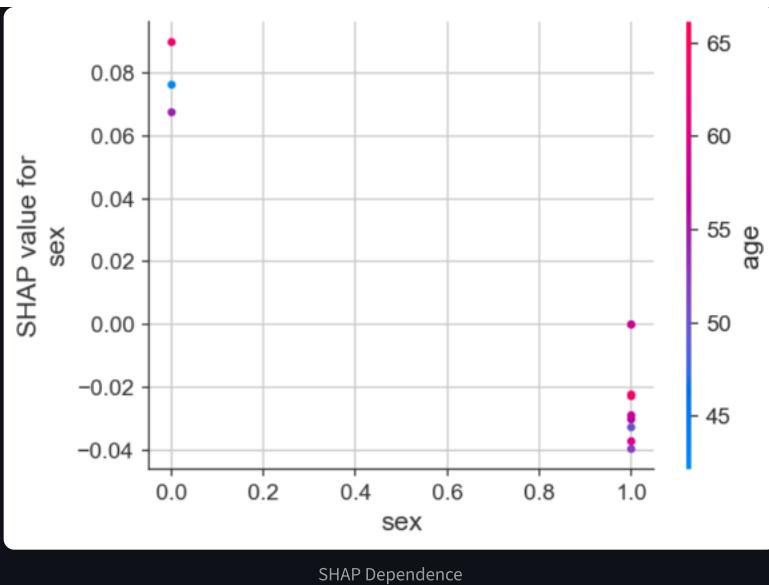
## 🔍 SHAP Explainability (sample from TEST set)

Compute SHAP (sampled, test set)

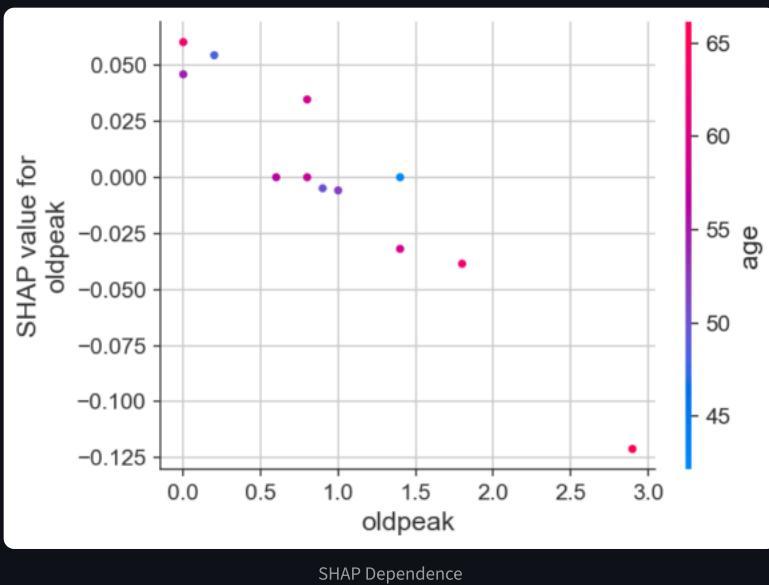




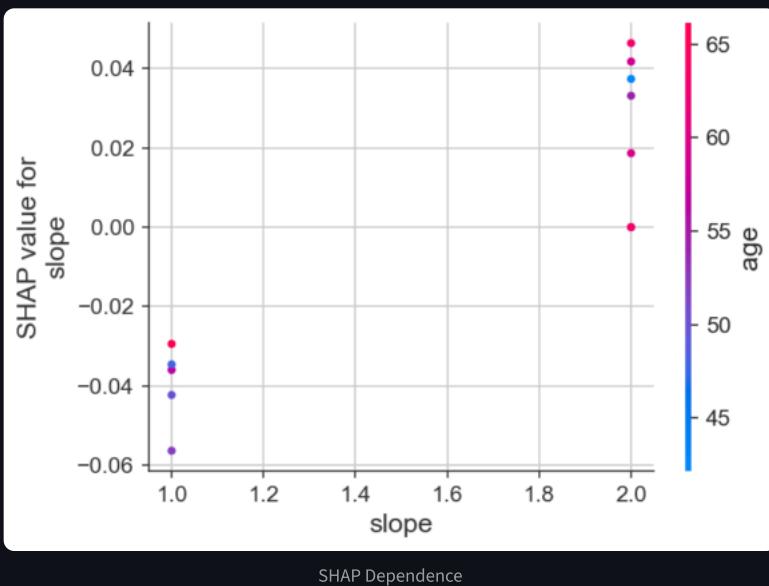




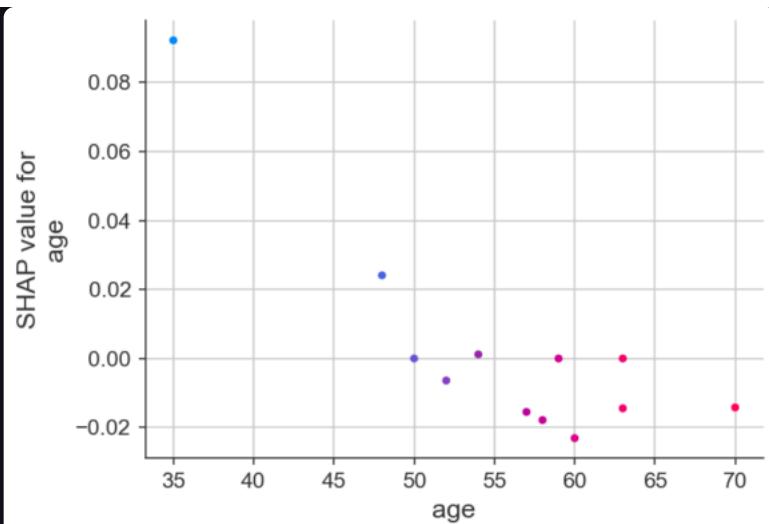
SHAP Dependence



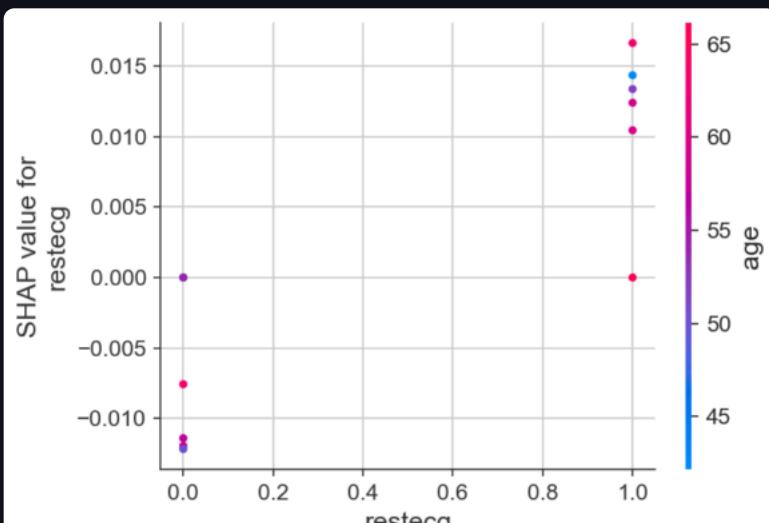
SHAP Dependence



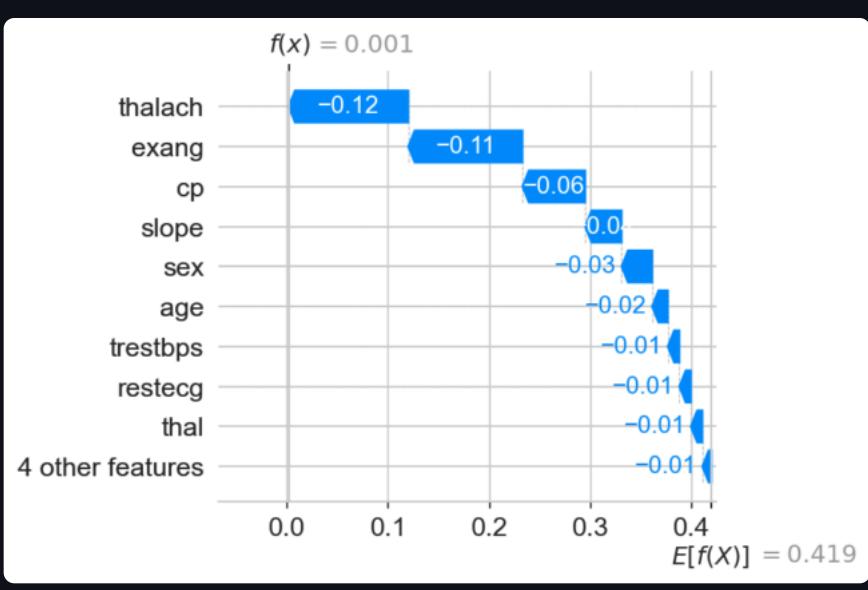
SHAP Dependence



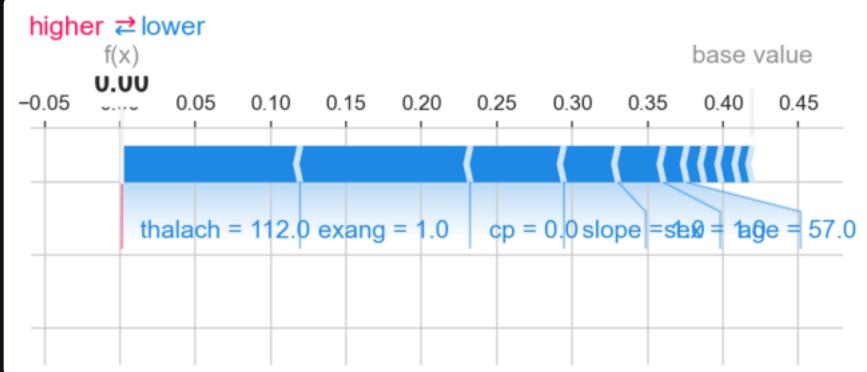
SHAP Dependence



SHAP Dependence

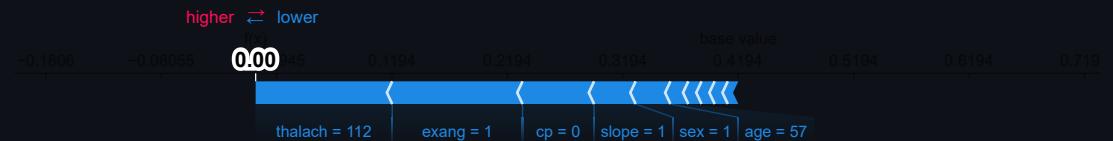


SHAP Waterfall



SHAP Force Plot

## SHAP Interactive Force Plot



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