PhenoQC Quality Control Report

Source file: e2e_input.csv

Summary

Imputation Strategy	Mean
Schema Validation Score	99.42%
Missing Data Score	93.47%
Mapping Success Score	100.00%
Overall Quality Score	97.63%

Imputation Settings

Global Strategy	knn
Global Params	{'n_neighbors': 5, 'weights': 'uniform'}
Tuning Enabled	True
Best Params	{'n_neighbors': 7}
Tuning Score	16.8479 (MAE)

Data Quality Scores:

Schema Validation Score: 99.42%
Missing Data Score: 93.47%
Mapping Success Score: 100.00%
Overall Quality Score: 97.63%

Schema Validation Results

Format Validation: False
Duplicate Records: 2 issues found.
Conflicting Records: 2 issues found.
Integrity Issues: 29 issues found.
Referential Integrity Issues: No issues found.
Anomalies Detected: 145 issues found.

Invalid Mask: 5000 issues found.

Additional Quality Dimensions

Accuracy Issues: 30 issues found.

row	column	value	minimum	maximum
202	Glucose_mgdl	900.0	20.0	800
205	Glucose_mgdl	900.0	20.0	800
438	Glucose_mgdl	900.0	20.0	800
507	Glucose_mgdl	12.71008343025686	20.0	800
582	Glucose_mgdl	900.0	20.0	800
717	Glucose_mgdl	900.0	20.0	800
1058	Glucose_mgdl	900.0	20.0	800
1087	Glucose_mgdl	900.0	20.0	800
2124	Glucose_mgdl	900.0	20.0	800
2410	Glucose_mgdl	900.0	20.0	800
2486	Glucose_mgdl	900.0	20.0	800
2667	Glucose_mgdl	900.0	20.0	800
2717	Glucose_mgdl	900.0	20.0	800
2826	Glucose_mgdl	900.0	20.0	800
2871	Glucose_mgdl	900.0	20.0	800
2955	Glucose_mgdl	900.0	20.0	800
3480	Glucose_mgdl	900.0	20.0	800
3519	Glucose_mgdl	900.0	20.0	800
3627	Glucose_mgdl	900.0	20.0	800
3717	Glucose_mgdl	900.0	20.0	800
3755	Glucose_mgdl	900.0	20.0	800
3796	Glucose_mgdl	900.0	20.0	800
3911	Glucose_mgdl	900.0	20.0	800
4630	Glucose_mgdl	900.0	20.0	800
4853	Glucose_mgdl	900.0	20.0	800
4900	Glucose_mgdl	900.0	20.0	800
205	Creatinine_mgdl	0.0627359405240941	0.1	20
1696	Creatinine_mgdl	0.0302860408006981	0.1	20
2752	Creatinine_mgdl	0.0067007532035059	0.1	20
4848	Creatinine_mgdl	0.0204195667640463	0.1	20

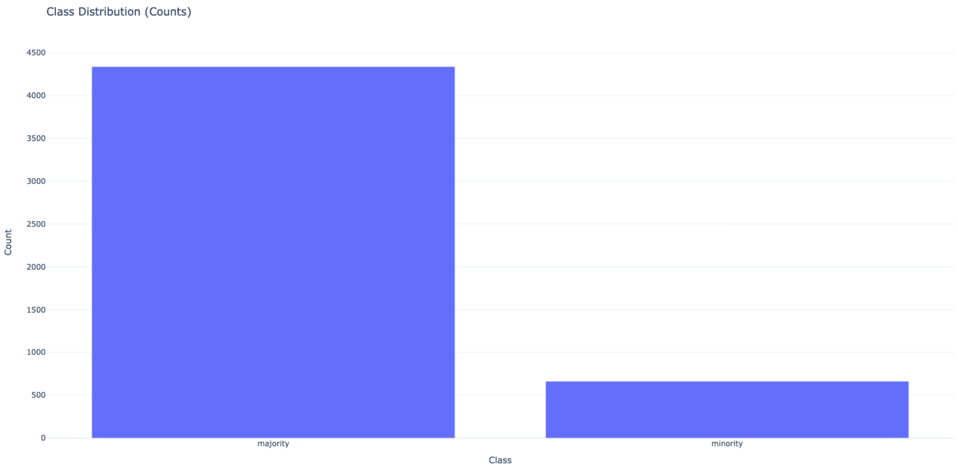
Redundancy Issues: No issues found.
Traceability Issues: 2 issues found.

row	issue
0	duplicate_identifier
1	duplicate_identifier

Timeliness Issues: No issues found.

Class Distribution

Class	Count	Proportion
majority	4338	86.76%
minority	662	13.24%



Imputation-bias diagnostics

Warning rules: SMD$\geq$0.1 | Var-ratio$\notin$ [0.5,2.0] | KS $p<0.05$

Variables evaluated: 7
: 7 issues found.

Variable	n_obs	n_imp	SMD	Var-ratio	KS p	Triggers	Warn
BP_diastolic	4776	224	0.059	0.961	0.0	KS p<0.05	True
BP_systolic	4754	246	-0.055	0.957	0.0	KS p<0.05	True
Cholesterol_mgdl	4510	490	-0.0	0.902	0.0	KS p<0.05	True
Creatinine_mgdl	3984	1016	-0.0	0.797	0.0	KS p<0.05	True
Glucose_mgdl	4423	577	-0.058	0.895	0.0	KS p<0.05	True
Height_cm	4619	381	-0.02	0.934	0.0	KS p<0.05	True
Weight_kg	4275	725	-0.009	0.879	0.0	KS p<0.05	True

Variable	Status	Triggers
BP_diastolic	WARN	KS p<0.05
Creatinine_mgdl	WARN	KS p<0.05
Cholesterol_mgdl	WARN	KS p<0.05
Weight_kg	WARN	KS p<0.05
Height_cm	WARN	KS p<0.05
BP_systolic	WARN	KS p<0.05
Glucose_mgdl	WARN	KS p<0.05

Missing Data Summary

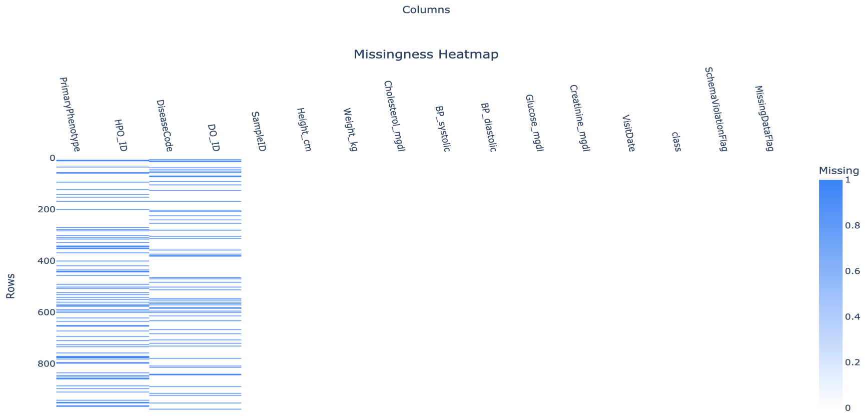
Column	Missing Count
Creatinine_mgdl	1016
DiseaseCode	808
PrimaryPhenotype	756
Weight_kg	725
Glucose_mgdl	577
Cholesterol_mgdl	490
Height_cm	381
BP_systolic	246
BP_diastolic	224

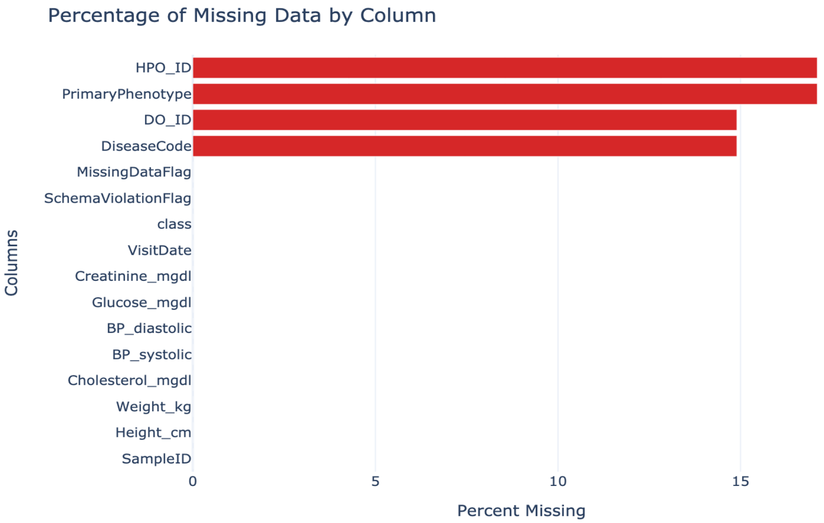
Records Flagged for Missing Data: 3392

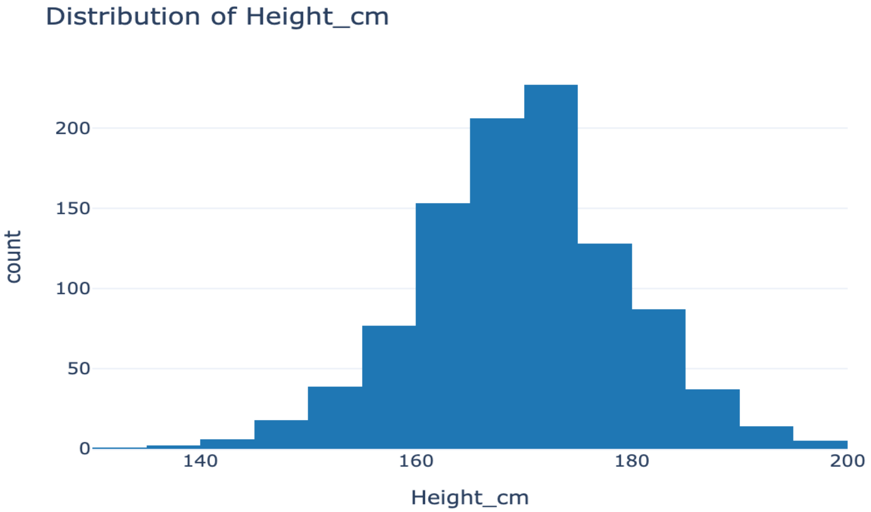
Ontology Mapping Summary

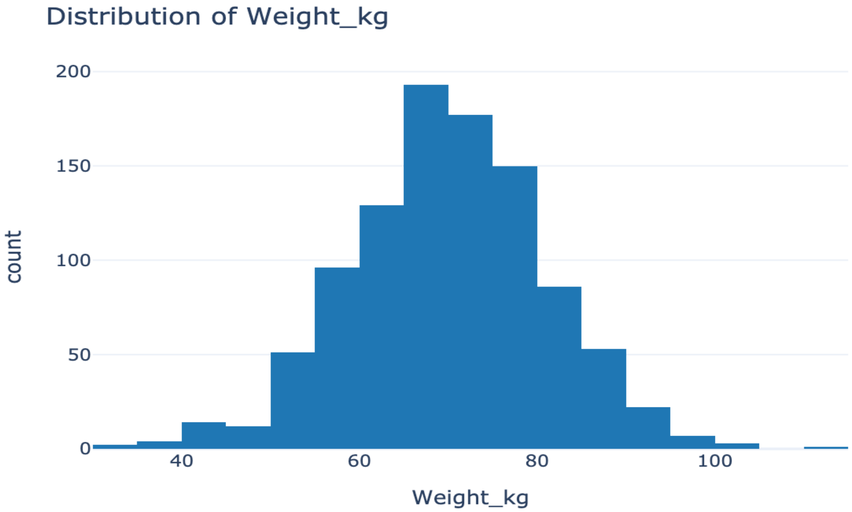
Ontology	Total Terms	Mapped	Success Rate
HPO	4	4	100.00%
DO	2	2	100.00%

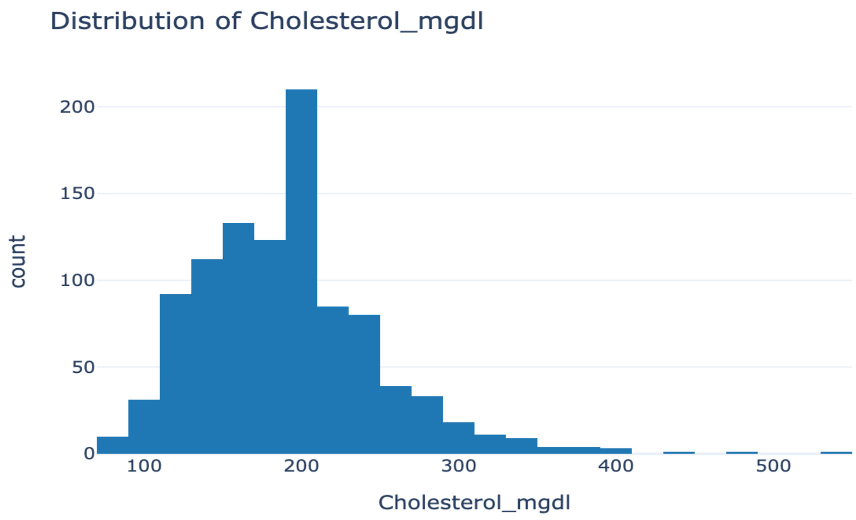
Visualizations

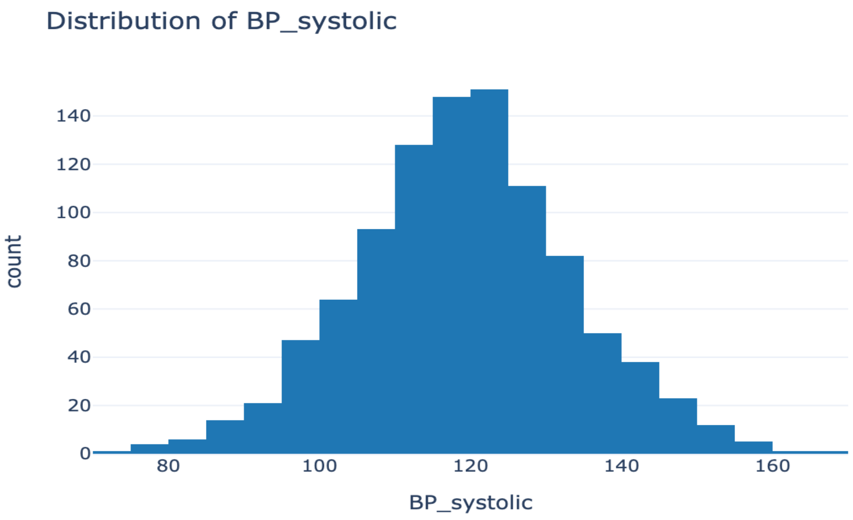


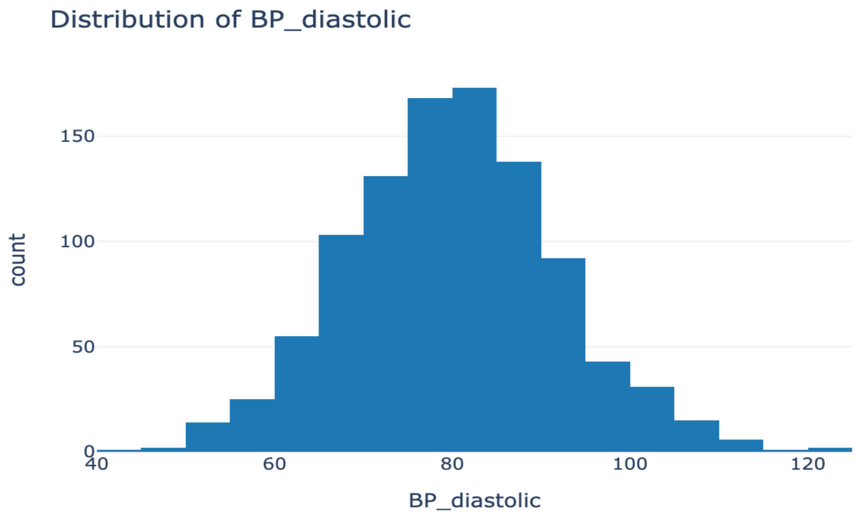


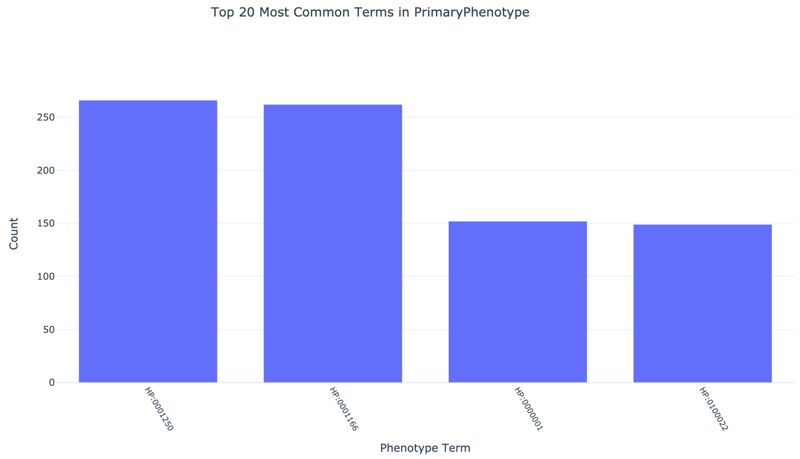




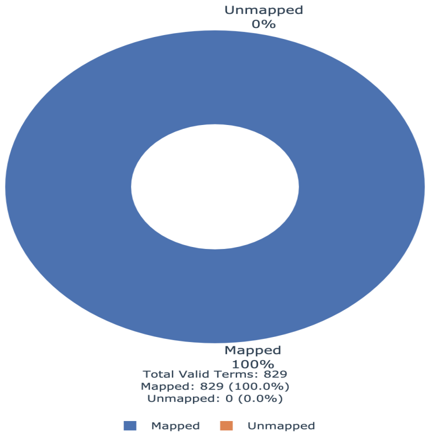

Distribution of Cholesterol_mgdl


Distribution of BP_systolic

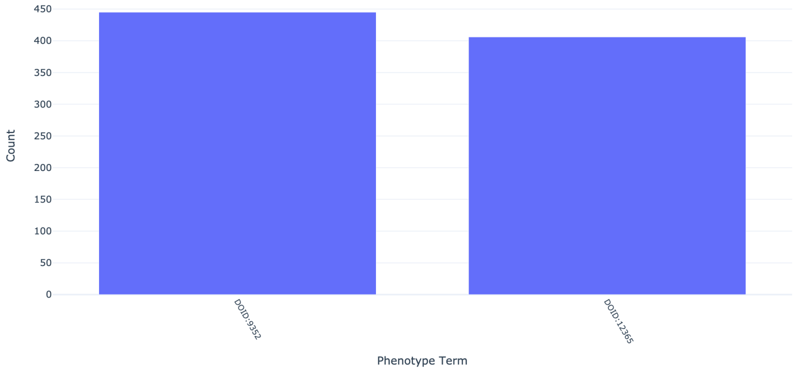

Distribution of BP_diastolic


Top 20 Most Common Terms in PrimaryPhenotype

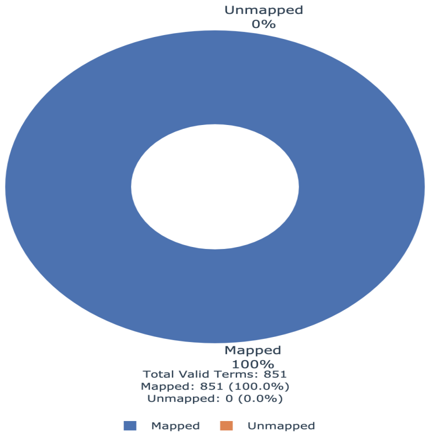
Mapping Results: PrimaryPhenotype → HPO



Top 20 Most Common Terms in DiseaseCode



Mapping Results: DiseaseCode → DO


Unmapped
Mapped
Total Valid Terms: 851
Mapped: 851 (100.0%)
Unmapped: 0 (0.0%)
Mapped
Unmapped