edunet foundation

Coronary Heart Disease Risk Prediction

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Program Feedback

The program was a fantastic experience. I highly recommend it to anyone looking to enter the fields of AI and cloud computing. The materials and services provided are incredibly useful for future development, and the mentorship was excellent.

Project Short Summary

The project aims to predict the 10-year risk of coronary heart disease (CHD) using a dataset of over 4000 records with 15 attributes. Various machine learning models are trained and evaluated. Models are assessed using metrics like Accuracy, Precision, Recall, F1 Macro, and ROC-AUC. The best-performing model based on these metrics is selected for deployment.

Final project outcome

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The best models are:
Precision: SVM - 0.8301
Recall: Naive Bayes - 0.8024
Accuracy: Naive Bayes - 0.8024
ROC-AUC: SVM - 0.6758
F1 macro: Naive Bayes - 0.8092
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	Precision Train	Precision Test	Recall Train	Recall Test	Accuracy Train	Accuracy Test	ROC-AUC Train	ROC-AUC Test	F1 macro Train	F1 macro Test
Logistic regression	0.690548	0.825380	0.690297	0.694690	0.690297	0.694690	0.690297	0.667273	0.690195	0.737263
Random Forest	1.000000	0.801045	1.000000	0.794985	1.000000	0.794985	1.000000	0.596971	1.000000	0.797934
XGB	0.990998	0.804144	0.990917	0.817109	0.990917	0.817109	0.990917	0.592704	0.990917	0.810131
Naive Bayes	0.644566	0.817170	0.610102	0.802360	0.610102	0.802360	0.610102	0.635626	0.585392	0.809195
SVM	0.683127	0.830060	0.682100	0.679941	0.682100	0.679941	0.682100	0.675843	0.681654	0.726235

#skillsbuild