Rank	Model	Train Score (%)	Test Score (%)	Accuracy (%)	Model Type	Strength	Weakness	Remarks
Last	XGBoost	99.99%	-58.76%	−58.76%	Boosting (Ensemble)	High learning capability, handles complex patterns	Severe Overfitting	Not suitable in current tuning
Lowest	SVR	-8.42%	-7.26%	-7.26%	Support Vector Regression	Works well on small & non-linear data	Poor performance without proper scaling/tuning	Severe Underfitting
Lower Side	Ridge	13.85%	-31.05%	-31.05%	Linear Regression with L2 Regularization	Reduces overfitting, stable model	Cannot capture complex non-linear patterns	Underfitting
Last	Random Forest	84.44%	-19.25%	-19.25%	Ensemble (Bagging)	Handles non-linearity, reduces variance	Overfitting tendency	Moderate Overfitting
Last	MLP	-31.06%	-60.37%	-60.37%	Neural Network	Can model complex non-linear patterns	Needs large data & tuning	Severe Underfitting
Last	Linear Regression	13.96%	-35.87%	-35.87%	Supervised (Linear)	Simple, Fast, Easy to Interpret	Poor Generalization, Underfitting	Model underfits the data; not suitable for this dataset
Last	LightGBM	84.82%	-28.36%	-28.36%	Supervised (Boosting)	High training performance, Fast training speed	Severe overfitting, Poor generalization	Model overfits the training data and fails to generalize on unseen data
Third	Lasso	11.56%	-20.07%	-20.07%	Supervised (Regularized Linear)	Performs feature selection, Reduces overfitting	Underfitting, Poor predictive performance	Model shows weak learning ability and poor generalization
Fifth	KNN	17.10%	-41.87%	-41.87%	Supervised (Instance-based)	Simple, Non-parametric	Sensitive to noise & scaling, Poor generalization	Model shows very poor test performance and underfitting behavior
Fourth	Gradient Boosting	63.25%	-25.66%	-25.66%	Supervised (Boosting)	Good training fit, Handles complex patterns	Overfitting tendency, Poor test performance	Moderate training fit but fails to generalize on unseen data
Sixth	Extra Trees	100.00%	-45.64%	-45.64%	Supervised (Ensemble)	Perfect fit on training data	Severe overfitting, Poor generalization	Model memorized training data completely but fails badly on unseen data
Seventh	Decision Tree	100.00%	-236.40%	-236.40%	Supervised (Tree-based)	Perfect fit on training data	Extreme overfitting, Cannot generalize	Model memorized training data completely but fails catastrophically on unseen data
Fifth	CatBoost	95.88%	-30.20%	-30.20%	Supervised (Boosting)	Excellent fit on training data, Handles categorical variables well	Overfitting, Poor generalization	Model shows strong training performance but fails to generalize on unseen data
Second	AdaBoost	8.76%	-23.72%	-23.72%	Supervised (Boosting)	Simple, Easy to implement	Underfitting, Poor predictive performance	Model barely learns the data and generalizes poorly