

Model Performance Report: Gradient Boosting

MODEL DETAILS:

- Algorithm: Gradient Boosting
- Training Samples: 141
- Test Samples: 36
- Features: 12

PERFORMANCE METRICS:

- Root Mean Square Error (RMSE): 9.1881
- R^2 Score: 0.7178
- Mean Absolute Error (MAE): 5.8922
- Mean Square Error (MSE): 84.4210

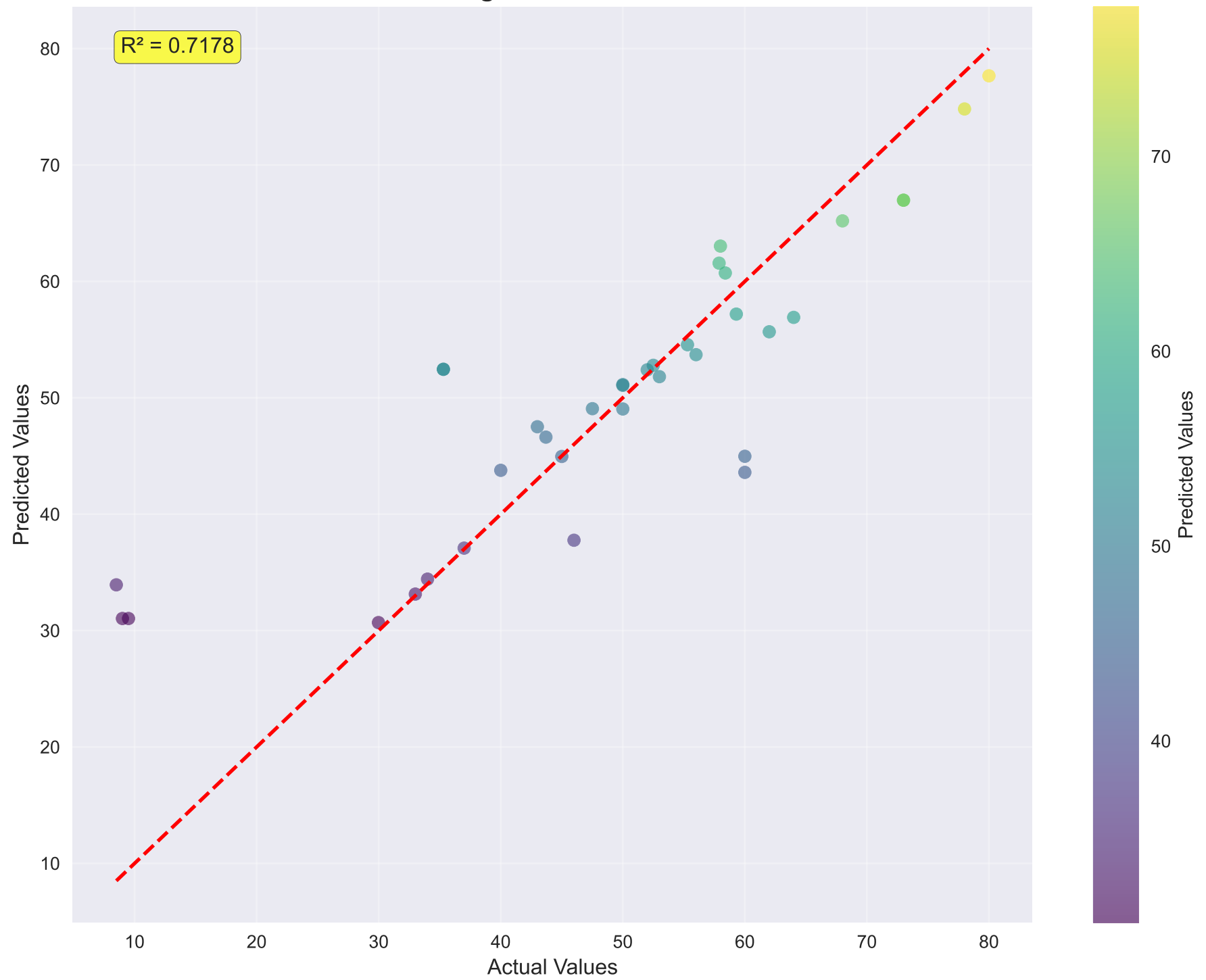
INTERPRETATION:

- R^2 Score of 0.7178 means the model explains 71.78% of the variance
- RMSE of 9.1881 indicates average prediction error
- Lower RMSE and MAE values indicate better model performance
- R^2 closer to 1.0 indicates better model fit

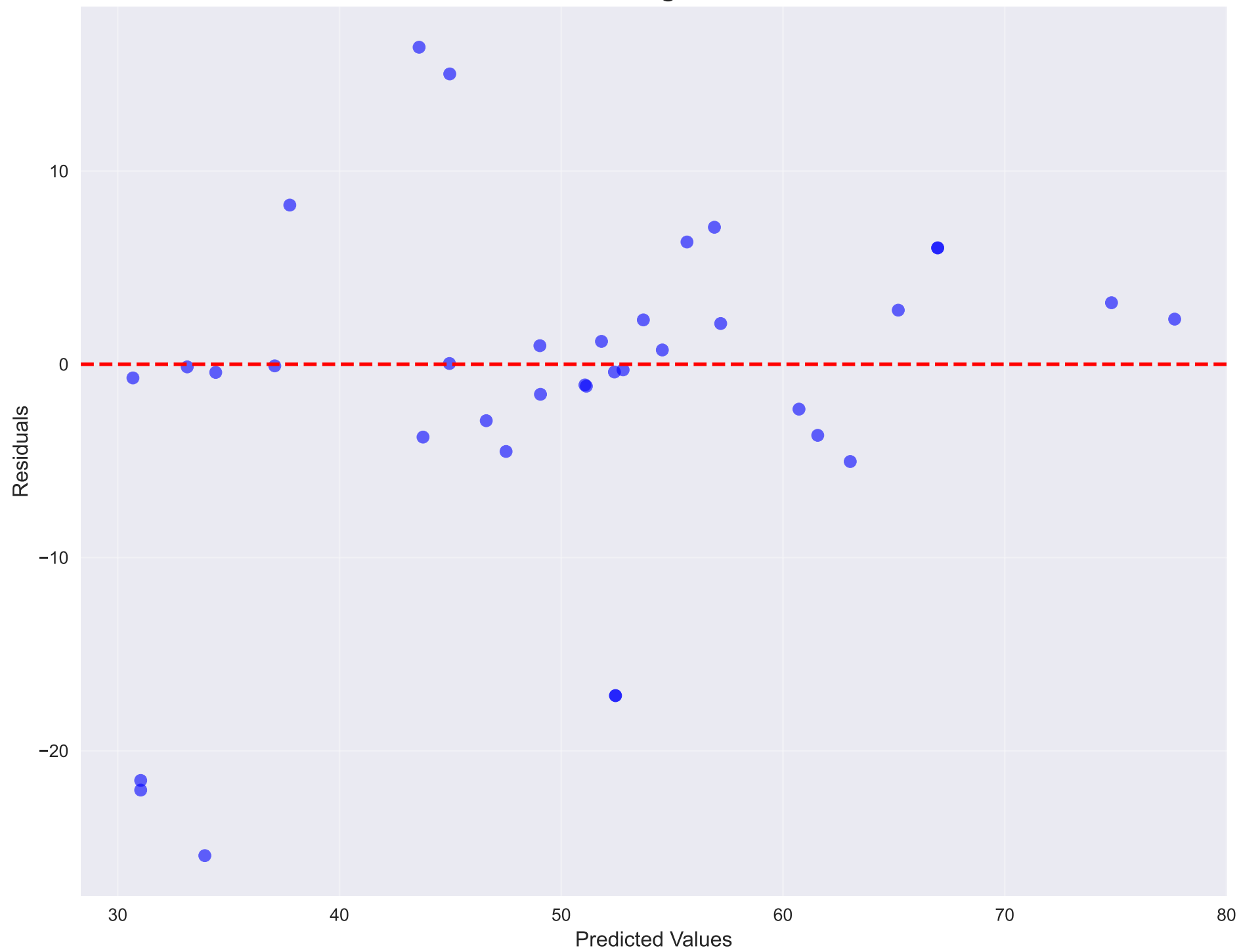
DATASET INFORMATION:

- Target Variable: Last Column
- Problem Type: Regression
- Cross-validation: 3-fold GridSearchCV used for hyperparameter tuning

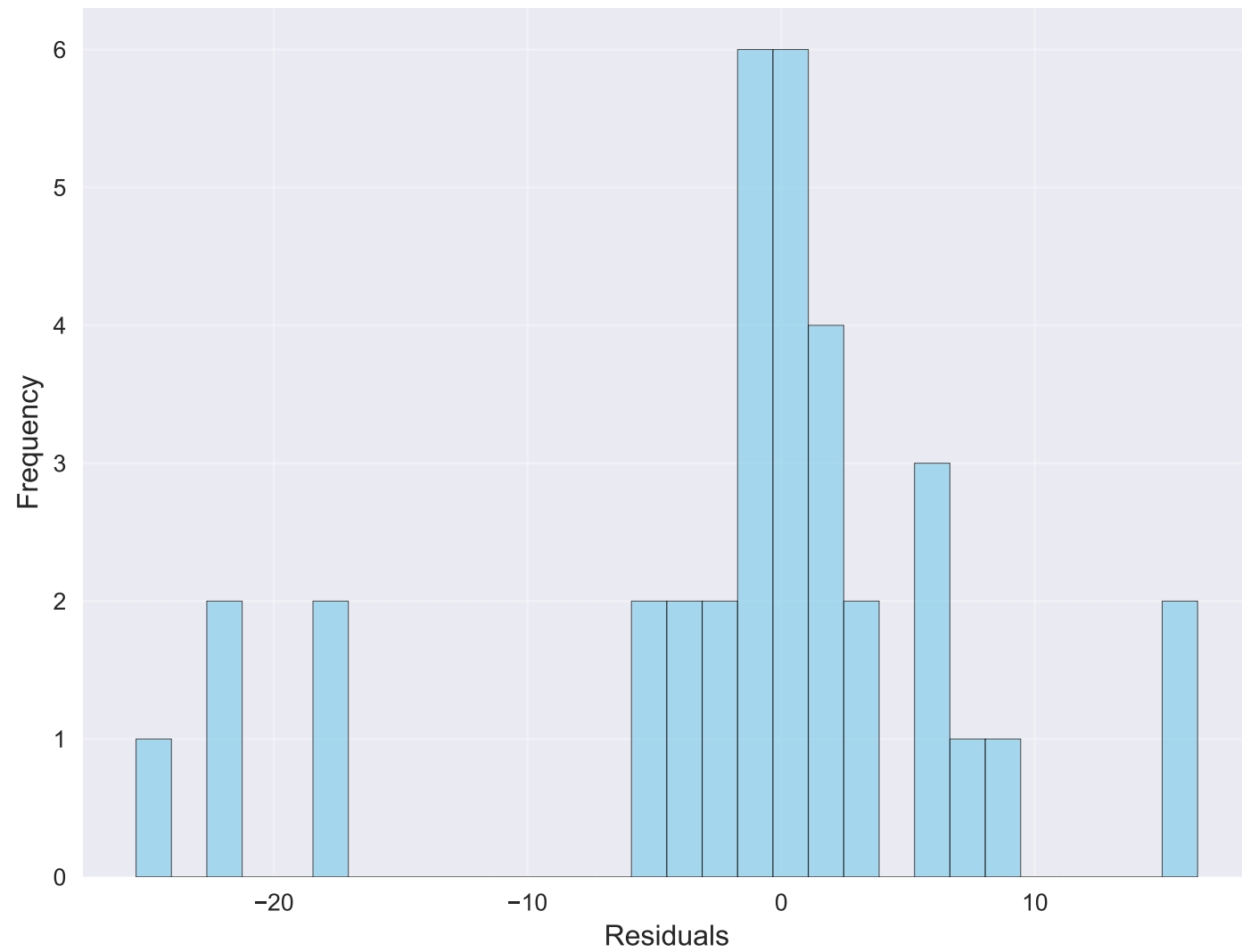
Gradient Boosting: Actual vs Predicted Values



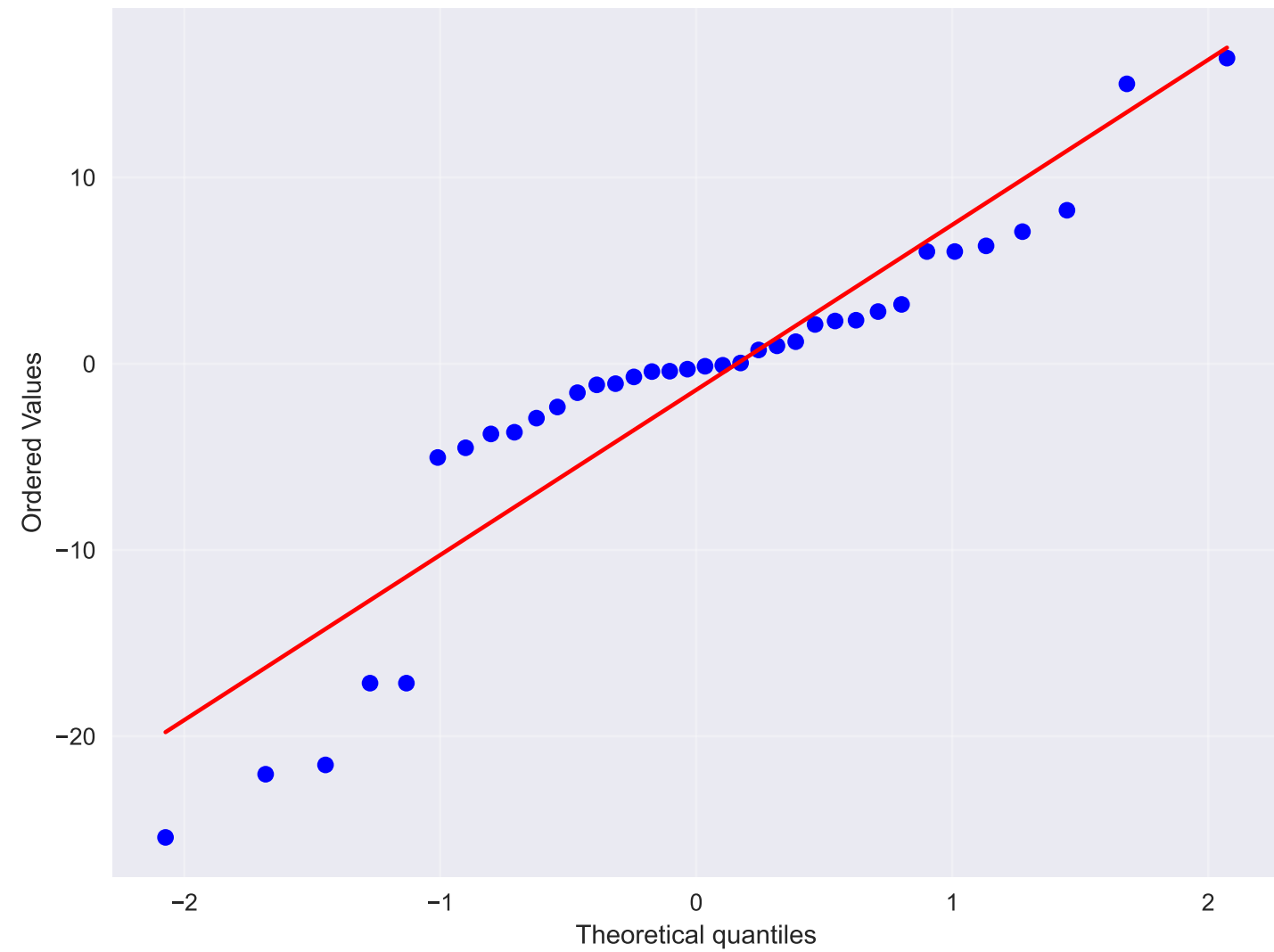
Gradient Boosting: Residual Plot



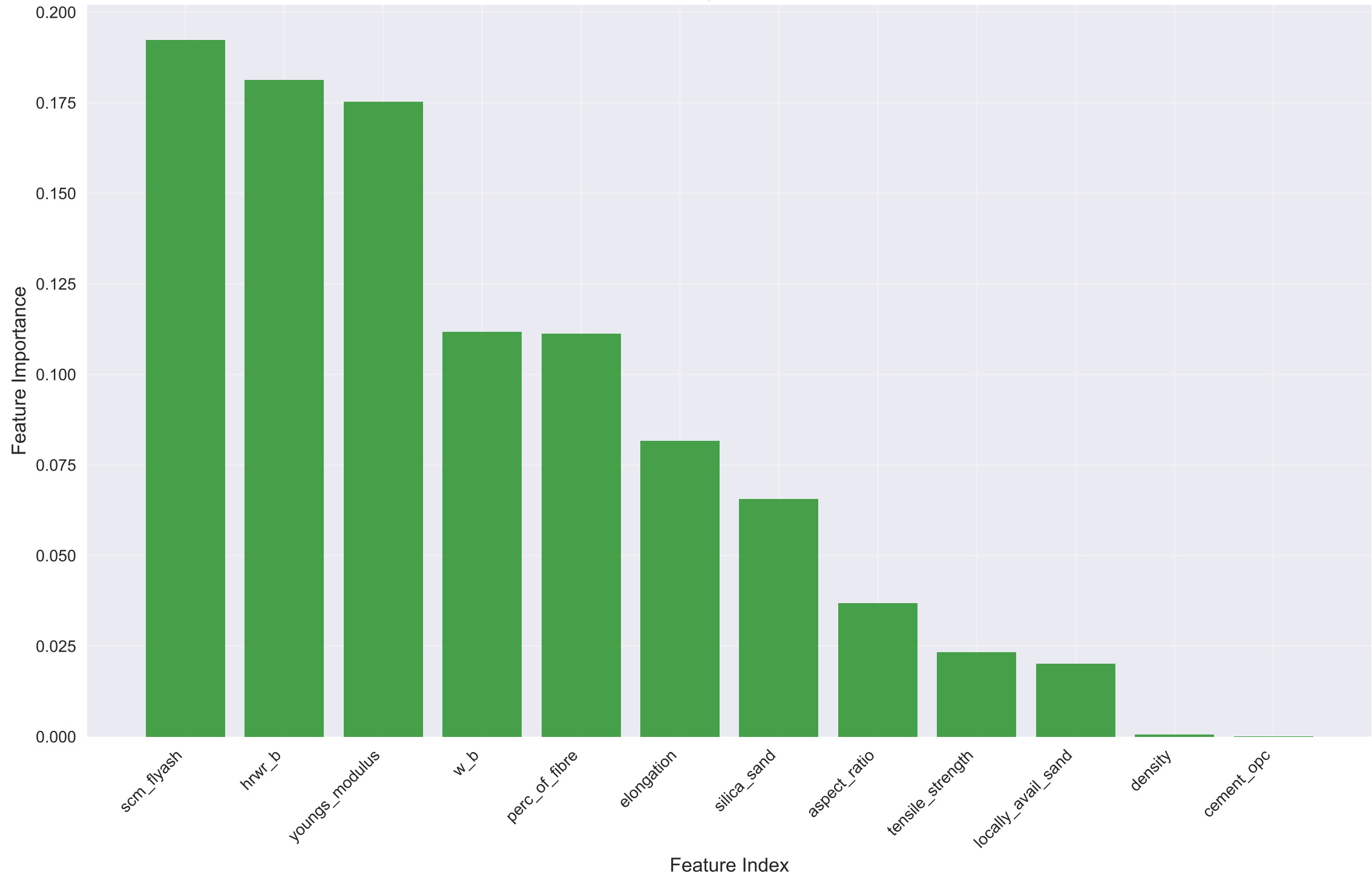
Distribution of Residuals



Q-Q Plot of Residuals



Gradient Boosting: Feature Importance



Gradient Boosting: Performance Metrics Summary

