Paper Validation Report for MetaSelect

Correspondence: Yes
Percentages: 95.0%

Conclusion:

The repository code closely matches the experimental setup, models, feature selection methods, datasets, metrics, and analysis described in the paper. The code implements the required meta-learning classifiers (KNN, Logistic Regression, XGBoost, MLP), uses a large set of OpenML-derived tabular datasets, and processes meta-features in accordance with the described preprocessing steps. All major feature selection methods discussed (model-based, correlation, counterfactual, filter-based, wrapper, etc.) are implemented. Experimental pipelines for adding uninformative features, evaluating feature selection under data shifts, and reporting metrics like F1 score and SHAP-derived interpretability are present. Plotting and analysis scripts for reproducing figures are included. Minor details that may limit absolutely perfect correspondence (which might prevent a 100% score) include the lack of direct visibility into whether the exact folds and particular statistical treatments (e.g., random seeds, full data splits) strictly match the paper, but overall, the alignment is strong and the main results are reproducible.