

Random Forest Result #140 — Analysis Report

Generated 2026-09-21 02:35:56 · 1 run(s) · CAT-G Data Analyzer

1. random forest (#140)

2026-09-21 02:12:05 · random_forest · status: completed

The classifier predicts the target with 100.0% cross-validated accuracy, weighted F1 1.000.

task_type	classification
accuracy_mean	1.0
accuracy_std	0.0
f1_mean	1.0
f1_std	0.0
n_classes	3

permutation importance

name	mean	std
PLOT	0.0	0.0
LAT	0.004667	0.0066
LONG	0.011	0.004967
ENV_SOILNH4	0.0	0.0
ENV_SOILNO3	0.0	0.0
ENV_SOILP	0.0	0.0
ENV_SOILOC	0.004667	0.0066
ENV_SOILTN	0.0	0.0
ENV_SOILTC	0.0	0.0
ENV_PH	0.0	0.0

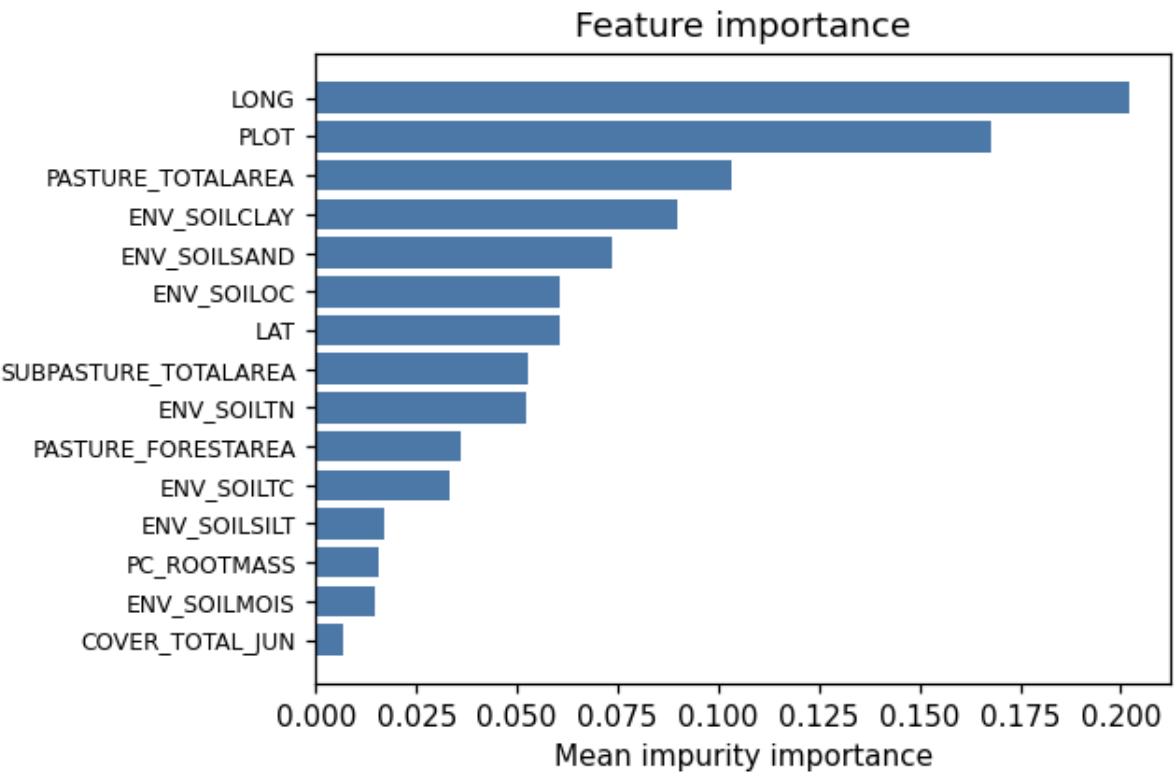
shap importance

name	mean_abs
PLOT	0.066248
LAT	0.02633
LONG	0.077888
ENV_SOILNH4	0.0
ENV_SOILNO3	0.000331
ENV_SOILP	0.0
ENV_SOILOC	0.013416
ENV_SOILTN	0.01395
ENV_SOILTC	0.013066

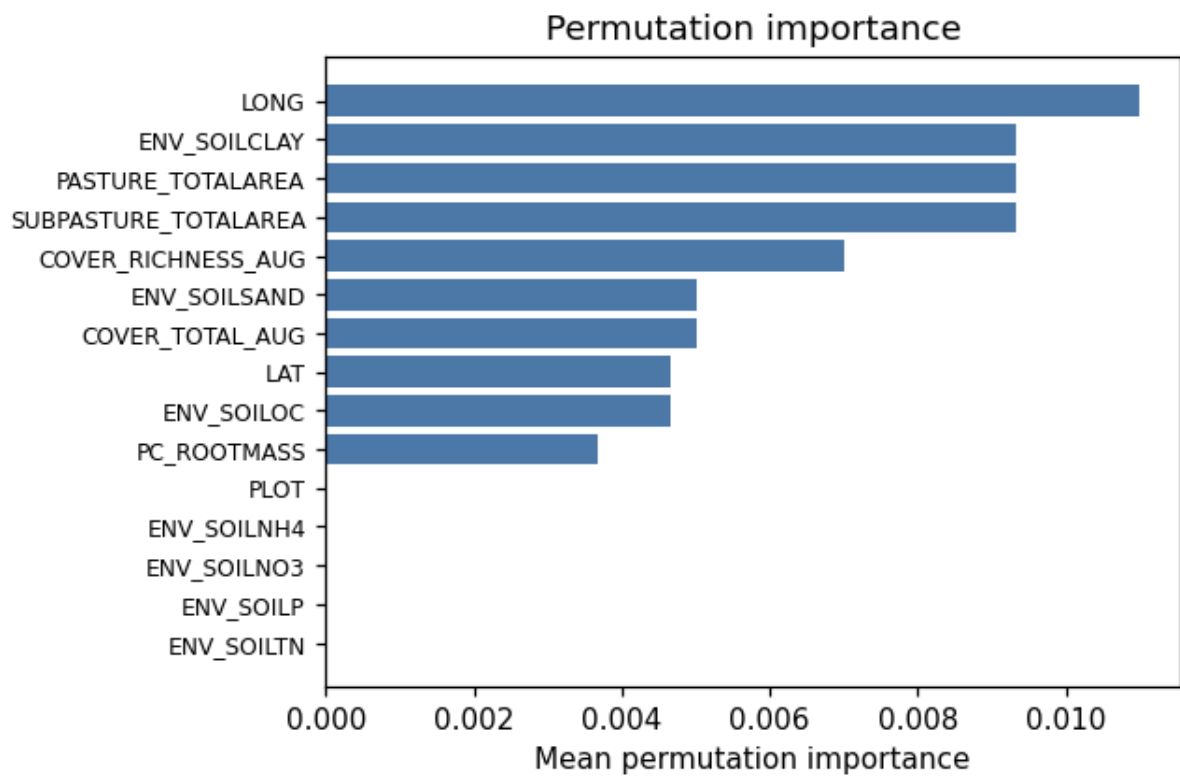
ENV_PH	0.0
--------	-----

split metrics

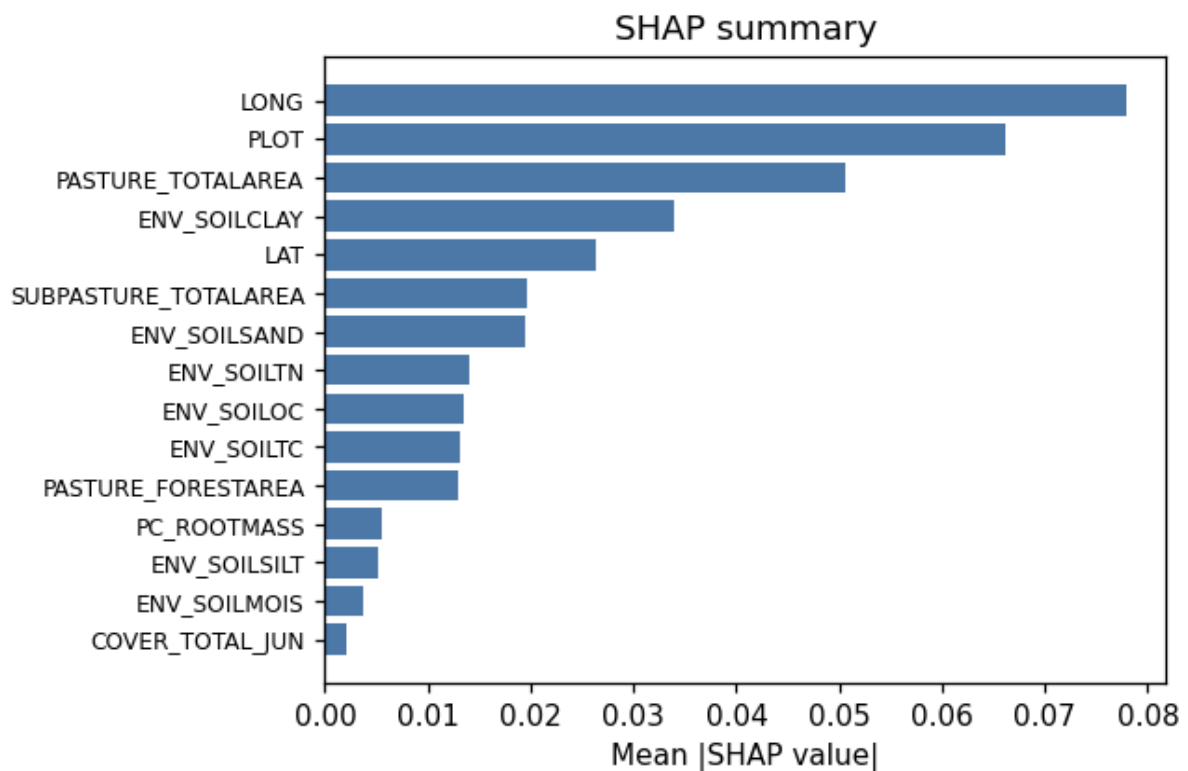
accuracy	f1_weighted
1.0	1.0
1.0	1.0
1.0	1.0



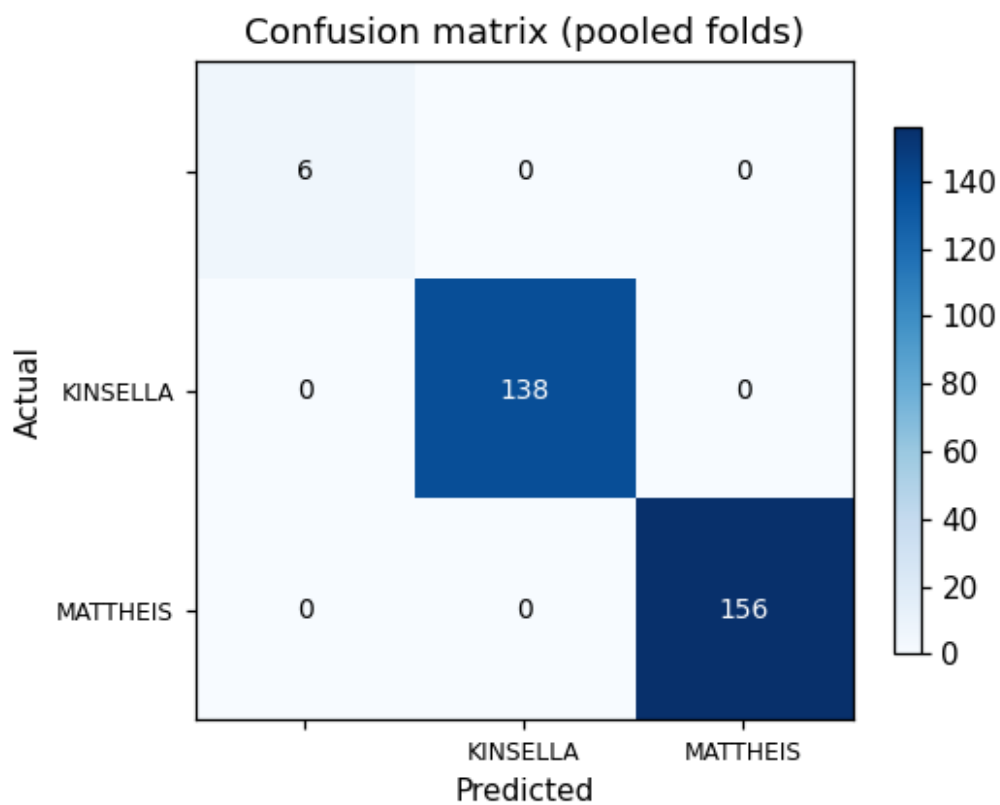
importance bar



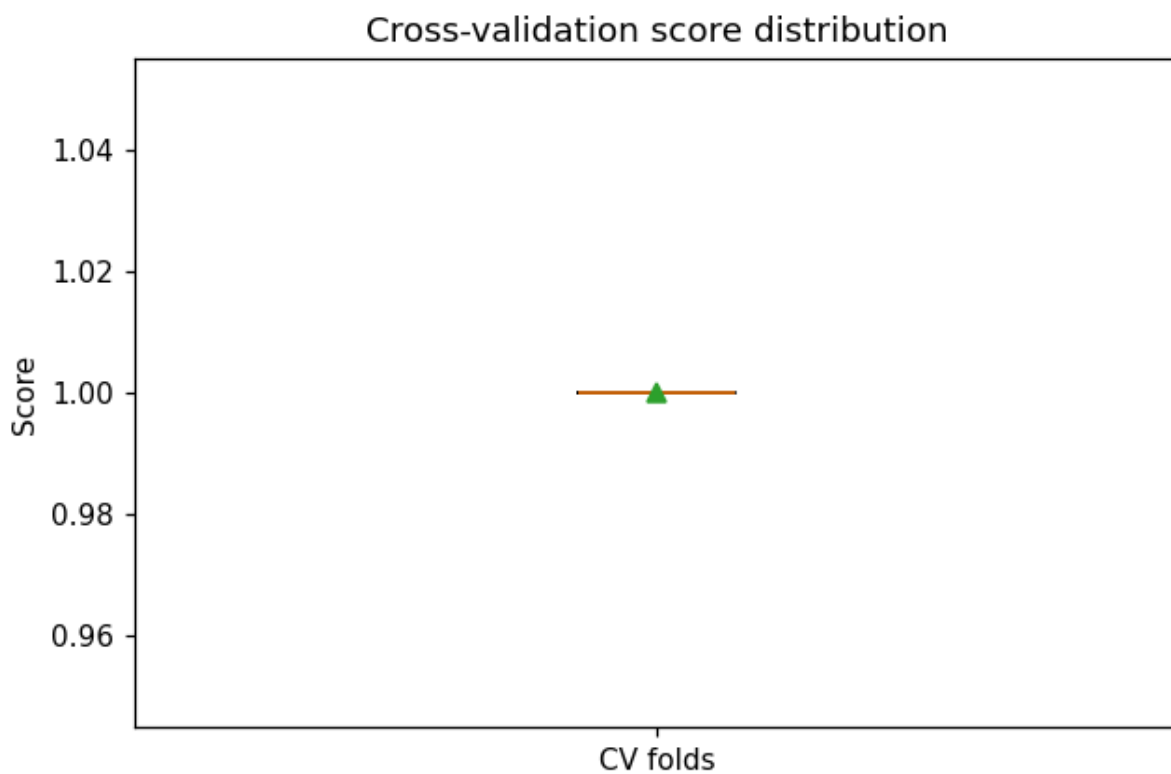
permutation bar



shap summary



confusion heatmap



cv boxplot

Method & Provenance

method	Random Forest (Classification)
--------	--------------------------------

engine	Python · scikit-learn 1.8.0
datasets	gallery — cat_g_field_data_plots.csv
started	2026-09-21 02:12:05.989988
permanent link	https://cat-g-omxpert.wishartlab.com/results/by-token/76d644e54c38460abc9ca6f21474

Parameter	Value
task_type	classification
model_type	classification
target_column	RANCH
n_estimators	60
n_splits	3
test_size	0.25
run_univariate	True
run_permutation	True
run_shap	True
permutation_repeats	10
fdr_threshold	0.05

Command history

```
# python
from sklearn.ensemble import RandomForestClassifier

# python
model = RandomForestClassifier(n_estimators=60, random_state=42)

# python
scores = sklearn.model_selection.cross_val_score(model, X, y, cv=3)
```