CodeAssistant 报告

（由自动审查与测试生成系统输出）

Contents

1 代码审查（Review）

1.1 概览

- 问题总数：195

- 高/中/低：13 / 117 / 65

- 工具数：4

- DS 规则命中总数：114

1.2 严重性分布

- medium：117

- low：65

- high：13

1.3 工具分布

- ds-rule：114

- rule-plugin：74

- bandit：6

- ast-rule：1

1.4 DS 规则分布

- DS_HYPERPARAMS_HARDCODED：92

- DS_PIPELINE_SUGGEST：10

- DS_RANDOM_SEED：8

- DS_SKLEARN_RANDOM_STATE：3

- DS_PANDAS_SETTINGWITHCOPY：1

1.5 Top 20 问题

1. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
   位置：`01\_the\_machine\_learning\_landscape.ipynb\#cell-52:3`
   说明：Model 'model' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

2. **[high] ds-rule DS_RANDOM_SEED**
   位置：`02\_end\_to\_end\_machine\_learning\_project.ipynb\#cell-17:5`
   说明：Randomness detected without an explicit seed.

3. **[medium] ds-rule DS_PIPELINE_SUGGEST**
   位置：`02\_end\_to\_end\_machine\_learning\_project.ipynb\#cell-81:2`
   说明：ordinal_encoder used without Pipeline; consider sklearn.pipeline.Pipeline.

4. **[medium] ds-rule DS_PIPELINE_SUGGEST**
   位置：`02\_end\_to\_end\_machine\_learning\_project.ipynb\#cell-84:8`
   说明：cat_encoder used without Pipeline; consider sklearn.pipeline.Pipeline.

5. **[medium] ds-rule DS_PIPELINE_SUGGEST**
   位置：`02\_end\_to\_end\_machine\_learning\_project.ipynb\#cell-88:2`
   说明：cat_encoder used without Pipeline; consider sklearn.pipeline.Pipeline.

6. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
   位置：`02\_end\_to\_end\_machine\_learning\_project.ipynb\#cell-120:3`
   说明：Model 'tree_reg' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

7. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
   位置：`02\_end\_to\_end\_machine\_learning\_project.ipynb\#cell-127:3`
   说明：Model 'forest_reg' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

8. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
   位置：`02\_end\_to\_end\_machine\_learning\_project.ipynb\#cell-131:3`
   说明：Model 'svm_reg' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

9. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
   位置：`02\_end\_to\_end\_machine\_learning\_project.ipynb\#cell-132:10`
   说明：Model 'forest_reg' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

10. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
    位置：`02\_end\_to\_end\_machine\_learning\_project.ipynb\#cell-139:9`
    说明：Model 'forest_reg' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

11. **[high] ds-rule DS_RANDOM_SEED**
    位置：`03\_classification.ipynb\#cell-20:3`
    说明：Randomness detected without an explicit seed.

12. **[low] rule-plugin PY_LOOP_INVARIANT**
    位置：`03\_classification.ipynb\#cell-27:16`
    说明：考虑在循环外计算长度，避免每次迭代都重新计算

13. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
    位置：`03\_classification.ipynb\#cell-60:2`
    说明：Model 'forest_clf' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

14. **[medium] ds-rule DS_PIPELINE_SUGGEST**
    位置：`03\_classification.ipynb\#cell-77:3`
    说明：scaler used without Pipeline; consider sklearn.pipeline.Pipeline.

15. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
    位置：`03\_classification.ipynb\#cell-98:2`
    说明：Model 'knn_clf' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

16. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
    位置：`03\_classification.ipynb\#cell-169:3`
    说明：Model 'svm_clf' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

17. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
    位置：`03\_classification.ipynb\#cell-176:3`
    说明：Model 'forest_clf' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

18. **[medium] ast-rule BARE_EXCEPT**
    位置：`03\_classification.ipynb\#cell-216:9`
    说明：Avoid bare except; catch explicit exception types.

19. **[low] rule-plugin PY_LOOP_INVARIANT**
    位置：`03\_classification.ipynb\#cell-223:22`
    说明：考虑在循环外计算长度，避免每次迭代都重新计算

20. **[medium] ds-rule DS_HYPERPARAMS_HARDCODED**
    位置：`03\_classification.ipynb\#cell-235:4`
    说明：Model 'log_clf' has hardcoded hyperparameters; consider using GridSearchCV or extracting to config.

1.6 复杂度摘要

- 来源：Radon Cyclomatic Complexity（CC）

- 说明：等级通常为 A（简单）到 F（复杂），括号内为复杂度分数

文件	类型	符号（函数/方法）	等级	分数
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder._legacy_fit_transform	C	15
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_get_column_indices	C	14
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder._handle_deprecations	C	14
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	_BaseEncoder._fit	C	13
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	C	_BaseEncoder	C	11
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_get_column	B	10
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.inverse_transform	B	10
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer.fit_transform	B	10
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder._legacy_transform	B	9
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer._iter	B	9
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_transform_selected	B	8
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_check_key_type	B	8
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer._validate_transformers	B	7
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer._validate_remainder	B	7
D: /code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	_BaseEncoder._transform	B	6

文件	类型	符号（函数/方法）	等级	分数
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer.get_feature_names	B	6
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer._update_fitted_transformers	B	6
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_handle_zeros_in_scale	A	5
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	C	OneHotEncoder	A	5
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder._transform_new	A	5
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	C	ColumnTransformer	A	5
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer._fit_transform	A	5
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_get_transformer_list	A	4
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.__init__	A	4
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OrdinalEncoder.inverse_transform	A	4
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer._validate_output	A	4
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer._hstack	A	4
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_fit_transform_one	A	3
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.fit	A	3
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.fit_transform	A	3
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	C	OrdinalEncoder	A	3
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_transform_one	A	2

文件	类型	符号（函数/方法）	等级	分数
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	make_column_transformer	A	2
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.transform	A	2
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer._transformers	A	2
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer._transformers	A	2
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer.named_transformers_	A	2
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer.transform	A	2
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_fit_one_transformer	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	F	_argmax	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.n_values	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.n_values	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.categorical_features	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.categorical_features	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.active_features_	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.feature_indices_	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OneHotEncoder.n_values_	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OrdinalEncoder.__init__	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OrdinalEncoder.fit	A	1

文件	类型	符号（函数/方法）	等级	分数
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	OrdinalEncoder.transform	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer.__init__	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer.get_params	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer.set_params	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/future_encoders.py	M	ColumnTransformer.fit	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/docker/jupyter_notebook_config.py	F	export_script_and_view	A	4
D:/code_assistant/Git_repo/ageron__handson-ml/docker/bin/nbclean_checkpoints	M	NotebookAnalyser.clean_checkpoints	B	10
D:/code_assistant/Git_repo/ageron__handson-ml/docker/bin/nbclean_checkpoints	C	NotebookAnalyser	A	5
D:/code_assistant/Git_repo/ageron__handson-ml/docker/bin/nbclean_checkpoints	M	NotebookAnalyser.__init__	A	3
D:/code_assistant/Git_repo/ageron__handson-ml/docker/bin/nbclean_checkpoints	M	NotebookAnalyser.clean_checkpoints_recursively	A	3
D:/code_assistant/Git_repo/ageron__handson-ml/docker/bin/nbclean_checkpoints	F	main	A	2
D:/code_assistant/Git_repo/ageron__handson-ml/docker/bin/nbclean_checkpoints	M	NotebookAnalyser.get_hash	A	2
D:/code_assistant/Git_repo/ageron__handson-ml/docker/bin/nbclean_checkpoints	M	NotebookAnalyser.log	A	1
D:/code_assistant/Git_repo/ageron__handson-ml/docker/bin/rm_empty_subdirs	F	remove_empty_directories	C	15
D:/code_assistant/Git_repo/ageron__handson-ml/docker/bin/rm_empty_subdirs	F	main	A	2

2 测试生成（**TestGen**）

2.1 指标

- 写入测试文件数：16

- 覆盖函数数：138

- 输出目录：D:/code_assistant/Git_repo/ageron__handson-ml/reports/ageron__handson-ml/generated_tests

2.2 覆盖率报告

Name	Stmts	Miss	Cover	Missing
N/A	0	0	0%	