

PENERAPAN STACKING ENSEMBLE UNTUK PREDIKSI INDEKS EKONOMI HIJAU DI JAWA TIMUR DENGAN XGBOOST, LIGHTGBM, DAN CATBOOST

MATA KULIAH : RISET INFORMATIKA

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Start Slide

RESEARCH GAP

- Penelitian sebelumnya hanya fokus pada statistik deskriptif atau korelasi sederhana
- Kurangnya pendekatan prediktif dan analisis mendalam menggunakan machine learning
- Analisis Terbatas pada Skala Regional: Studi sebelumnya cenderung bersifat nasional tanpa analisis spesifik untuk provinsi atau kawasan seperti Jawa Timur.
- Penelitian terkait stacking ensemble untuk indeks ekonomi hijau di Indonesia, khususnya di level provinsi, masih sangat terbatas.

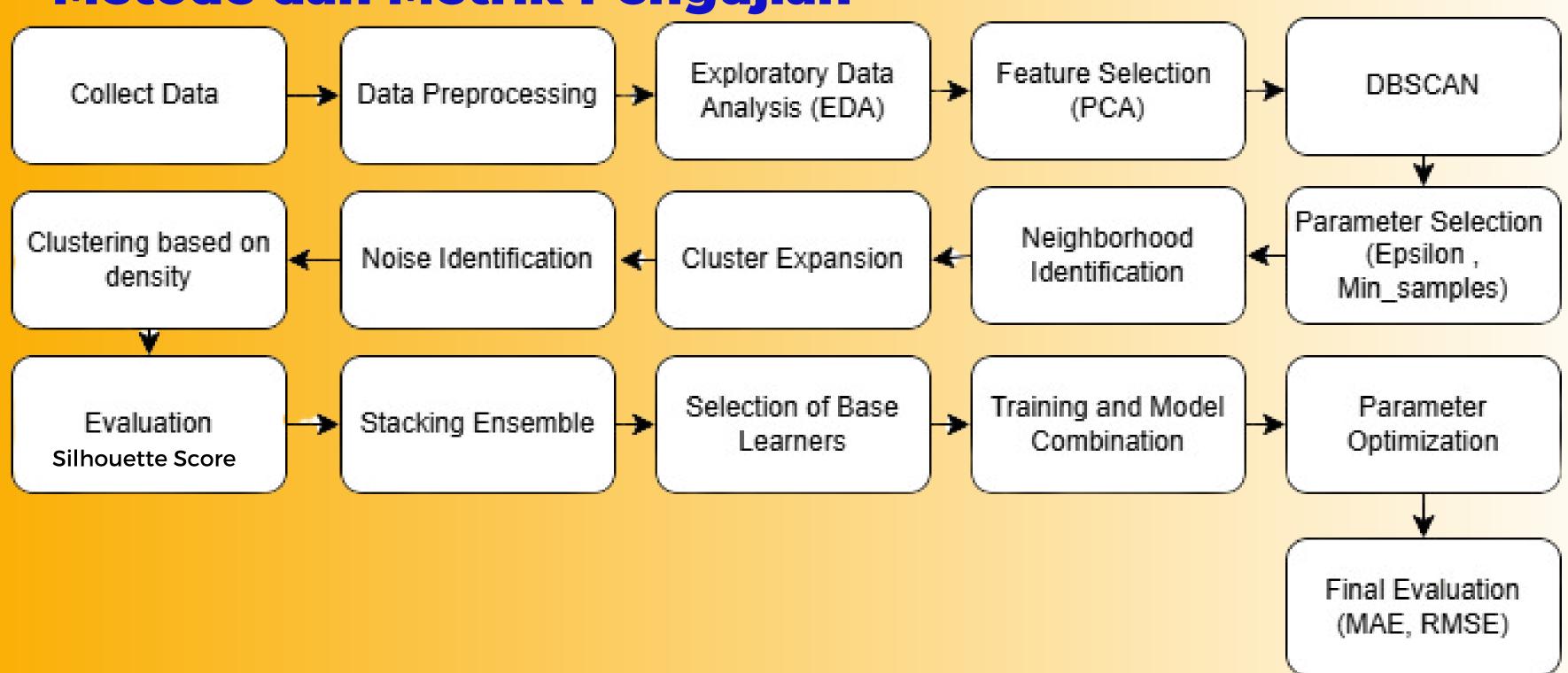
FORMULASI MASALAH

- Bagaimana penerapan algoritma stacking ensemble yang menggabungkan XGBoost, LightGBM, dan CatBoost dalam memprediksi indeks ekonomi hijau di Provinsi Jawa Timur?
- Apa pengaruh penerapan stacking ensemble terhadap akurasi prediksi indeks ekonomi hijau di Provinsi Jawa Timur dibandingkan dengan penggunaan model tunggal seperti XGBoost, LightGBM, atau CatBoost?
- Faktor sosial, ekonomi, dan lingkungan apa yang paling signifikan memengaruhi indeks ekonomi hijau di Provinsi Jawa Timur?
- Bagaimana metode machine learning dapat digunakan untuk segmentasi wilayah di Provinsi Jawa Timur berdasarkan indeks ekonomi hijau?

Google Scholar MIND MAP **RISET INFORMATIKA** EnPress How can the stacking ensemble algorithm, which combines XGBoost, LightGBM, and CatBoost, be applied to predict the green economy index in East Java? Science Direct What is the impact of applying stacking ensemble on the accuracy of the green economy index prediction in Research Topics East Java, compared to using single models such as XGBoost, LightGBM, or CatBoost? IEEE Which social, economic, and environmental factors are most significant in influencing the green economy Journal Publications SPRINGER index in East Java? How can machine learning be used for regional segmentation in East Java based on the green economy index? BPS Limited Dataset Access Application of Stacking Ensemble for Green Economy Index Prediction in Public Dataset Dataset Problems in Dataset East Java Using XGBoost, LightGBM, and CatBoost Imbalanced Data SIPSN Research Problems Stacking Ensemble: One key challenge is RMSE (Root Mean selecting the right base models and meta-model, as Square Error) well as properly tuning hyperparameters to avoid overfitting while combining diverse model outputs Stacking Ensemble Prediction for better predictions. MAE (Mean Absolute Error) DBSCAN: A challenge with DBSCAN lies in Problems in Methods Methods choosing the right parameters (epsilon and min_samples) for the density-based clustering, which can vary significantly across different datasets, and in dealing with noise or outliers that DBSCAN tends to label. Clusterization DBSCAN Silhoutte Score

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Metode dan Metrik Pengujian



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Proses Penelitian



THANKYOU

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