Machine Learning Techniques for Environmental Monitoring and Prediction

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Abstract. In this paper, we explore the application of machine learning techniques for environmental monitoring and prediction. By harnessing large datasets related to environmental parameters, machine learning models can predict changes in weather patterns, track pollution levels, and assist in resource management. The study provides insights into various algorithms and methodologies that enhance prediction accuracy and efficiency, contributing to the development of sustainable environmental strategies.

Keywords: machine, learning, environmental, monitoring, prediction

Introduction: The integration of machine learning in environmental sciences has become increasingly significant as the demand for precise and efficient monitoring and prediction systems grows. Traditional monitoring approaches often fall short in handling the vast amount of environmental data now available, requiring more advanced techniques to yield actionable insights. This research investigates the application of machine learning models to process and analyze environmental data effectively, fostering improved predictive capabilities and environmental management practices. By offering an overview of current methodologies, the study underscores the transformative potential of machine learning in addressing environmental challenges.

References

1. Kumar, N., & Kataria, V. (2023). Enhanced Sentiment Classification using a Multi-layered Stacked Ensemble Architecture. International Journal of Intelligent Systems and Applications in Engineering, 11(4s), 304–311.
2. Авдеев А.П. Макроэкономика. Учебное пособие: Закон и право. - М.: Юнити-Дана, 2015. 52 с.