

AN INTERACTIVE WEB-BASED GIS APPLICATION FOR THE ANALYSIS OF POLLUTANT DISPERSION MODELS

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ABSTRACT

The escalating concerns regarding air quality necessitate the development of advanced tools for the analysis and visualization of pollutant dispersion in the environment. This paper presents an innovative Interactive Web-Based GIS Application designed for the analysis of pollutant dispersion models. The integration of Geographic Information System (GIS) capabilities into the application enhances the spatial understanding of pollution patterns, contributing to more effective environmental management and decision-making. Also by simultaneously connecting the application's user interface to multiple APIs the user can obtain real time climate and environmental data that can be integrated into the modelling process.

The application leverages insights from existing literature on air pollution modeling [1], numerical simulations [2] and advancements in air quality assessment using machine learning [3,4]. Its user-friendly interface allows for dynamic visualization of pollutant dispersion, enabling policymakers, researchers, and the public to make informed decisions related to air quality management. The accessibility of the application via the web ensures widespread usability and encourages community involvement in environmental monitoring and protection.

KEYWORDS: pollutant dispersion modelling, web-based gis

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