Case Study Lab

Impact of Weather Variables and Roles of Human Population in Vector Borne Diseases

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Project Abstract

India, where one in every seventh person on the planet lives, has no major national study on the impact of climate change, although about 600 million people are at risk from its effects.

The life cycles and transmission of most infectious agents are inextricably linked with climate. This research revolves around analysing how the factors of climate influences its developments and spreading.

Extreme weather, increased temperature, and air quality poses direct risk to human vector borne disease. Air quality affects the survival rates of pathogens, while the temperature influences the life cycle of mosquitoes and transmitters. Further warmer temperature and humidity favours the breeding of insects.

On the other hand, Rapidly increasing population enhances the transmission of vector-borne diseases (like dengue, malaria), as Indirect risks are mediated through social processes (e.g., human-vector contacts).

Despite the global implications of this problem, the research is very limited in this domain. Towards the end, this research aims to show whether a single or combined weather variable has any significant association with the observed disease prevalence.

Domain: Climate and Diseases

Features

a. Data Visualization

The main **goal** of **data visualization** is to make it easier to identify patterns, trends and outliers in large data sets.Here we use it for analyzing and presenting climate simulations and observations as well as related social and ecological data.

b. Web support

A web page with detailed views about the graphs. Further, users or doctors will be given an option to download the worked out data visualization graphs and documents.

Tools and Technologies

The proposed tools and technologies will be used to mine data and visualize it.

Tools	Visual Studio Code, Amazon Cloud Services
Technologies	Python, React.js, SQL

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