West Nile Virus prediction in the city of Chicago

Problem statement:

Where and what season the West Nile Virus could be observed? How effective is aerial spraying on mosquitoes?

Context:

West Nile virus (WNV) is the leading cause of mosquito-borne disease in the United States. It is most commonly spread to people by the bite of infected mosquitoes. In Illinois the first human case of the WNV was reported in 2002. According to the CDC, about 1 in 5 people who are infected develop a fever and other symptoms. About 1 out of 150 infected people develop a serious, sometimes fatal, illness. Sadly vaccines to prevent or medications to treat WNV in people are yet to be developed.

Criteria for success:

The accurate prediction of locations and season when virus tests on mosquitoes get positive will help the city of chicago to mitigate the spread of virus.

Scope of solution space:

The city of Chicago can implement different health protocols and actions to prevent the outbreak of the virus.

Constraints:

Key data sources:

The data is provided by the Chicago Department of Public Health. It is accessible in Kaggle. The dataset includes test, train, weather, GIS and spray datasets.