

# H1N1 AND SEASONAL VACCINE

PHASE 3 PROJECT 2024

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# PROBLEM STATEMENT

- We take a look at vaccination, a key public health measure used to fight infectious diseases. Vaccines provide immunization for individuals, and enough immunization in a community can further reduce the spread of diseases through "herd immunity."
- Beginning in spring 2009, a pandemic caused by the H1N1 influenza virus, colloquially named "swine flu," swept across the world. Researchers estimate that in the first year, it was responsible for between 151,000 to 575,000 deaths globally

# ABOUT THE PROJECT

- In late 2009 and early 2010, the United States conducted the National 2009 H1N1 FLU Survey. This phone survey asked respondents whether they had received the H1N1 and seasonal flu vaccines, in conjunction with questions about themselves.
- These additional questions covered their social, economic and demographic background, opinions on risks of illness and vaccine effectiveness, behaviour towards mitigation transmission.
- A better understanding of how these characteristics are associated with personal vaccination patterns can provide guidance for future public health efforts.

# MODELS APPLIED

- The project which is a classification ,has used logistic regression model to try and predict the outcomes of the vaccination.
- All the Exploratory Data Analysis was done before the data was fed to the model

# FINDINGS

- From the model it was found that the model predicted a considerable number of false positive. This is due to the person having not presented the symptoms of the flu infection but turning out to be positive .
- More research to be done on the incubation of the disease and the best timelines for inception of symptoms

# CONCLUSION

- This acting as the baseline study for the intervention of COVID19 vaccines ,it provides insights in the areas of strength in combating the H1N1 which might be borrowed ,and the challenges that was encountered like public gathering and public health information.