

Influenza Forecasting in Canada

Presented by: Jessica Moloney

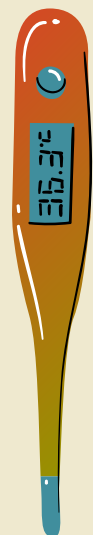
Topic Outline



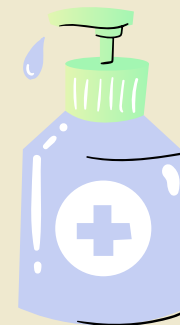
INTRODUCTION



MOTIVATION



WALK-THROUGH



FURTHER
DEVELOPMENTS



About Me



Psychology, Business
Analytics and Quality
Management



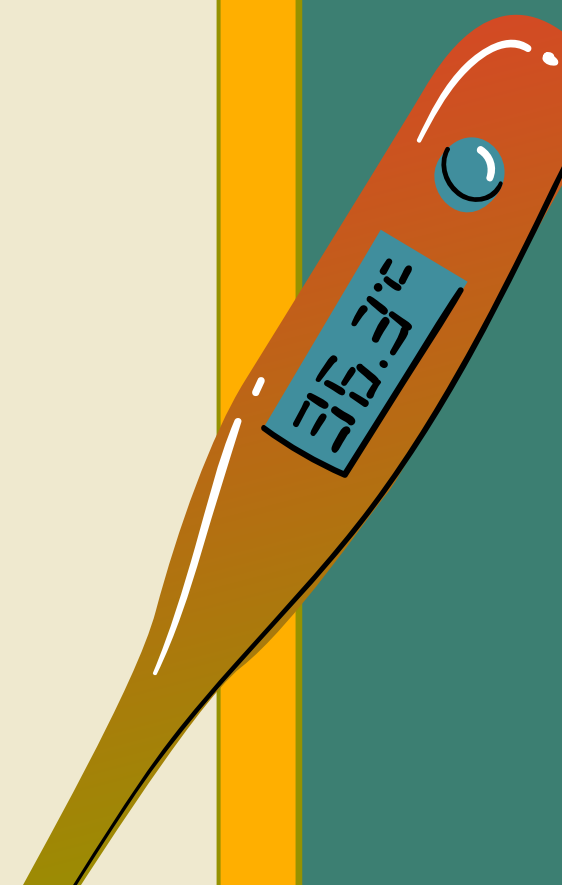
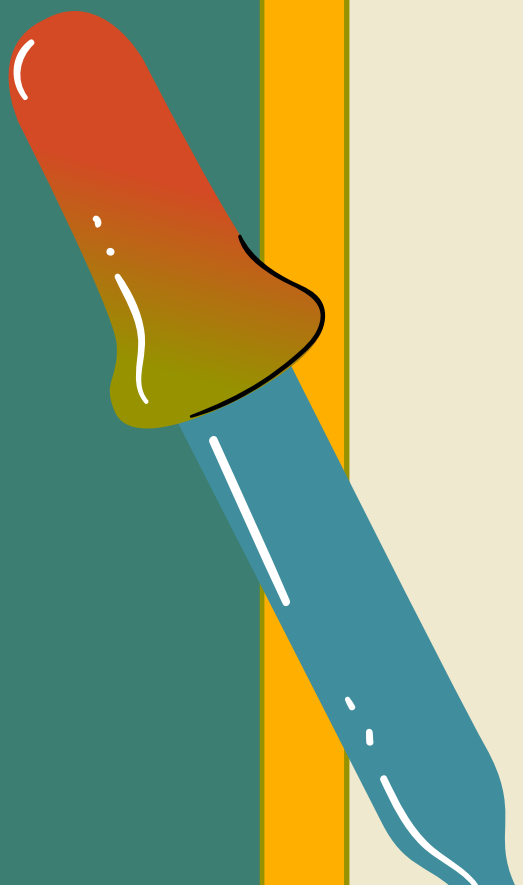
Passion for Public Health



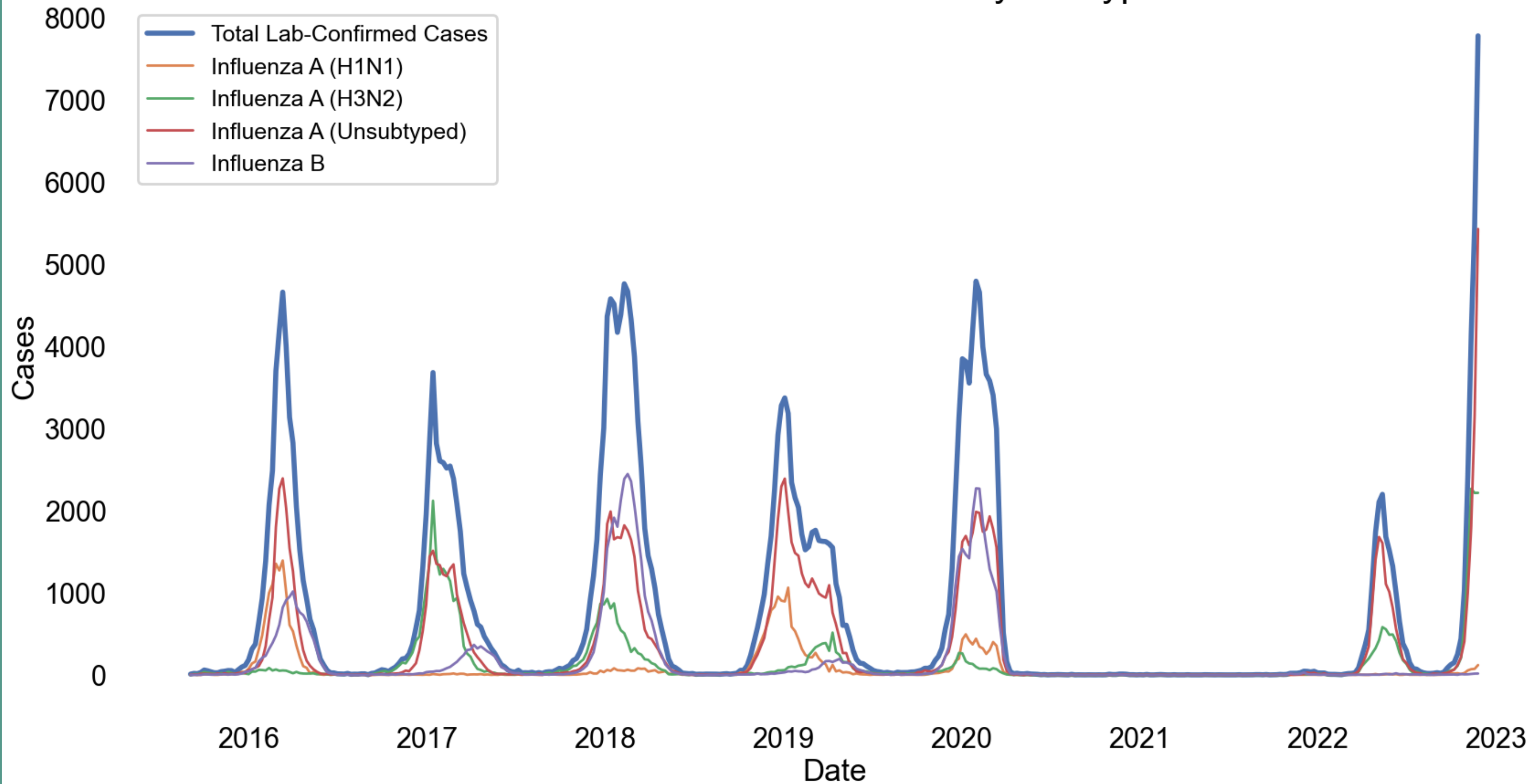
Fiddle Player!

Why Forecast Flu?

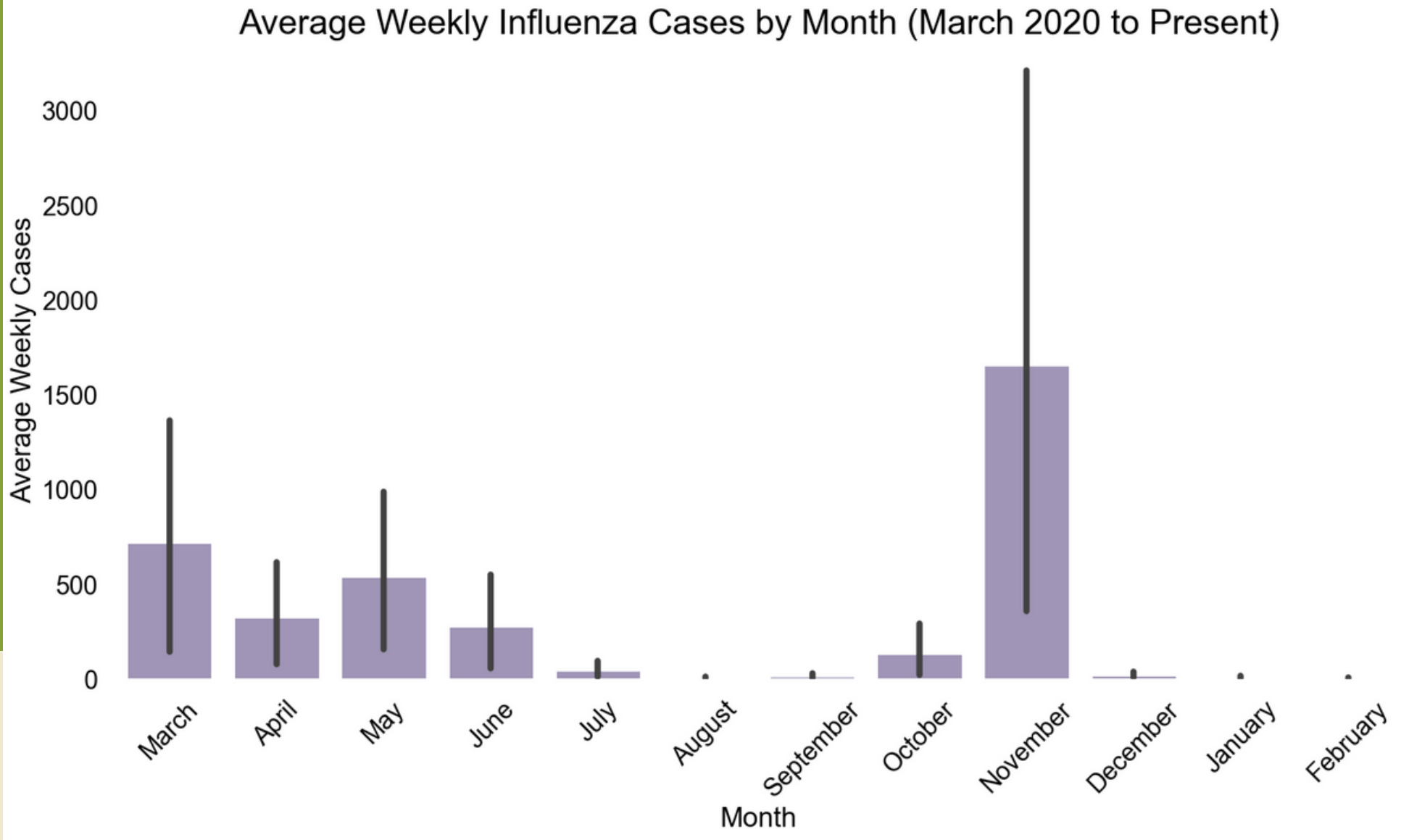
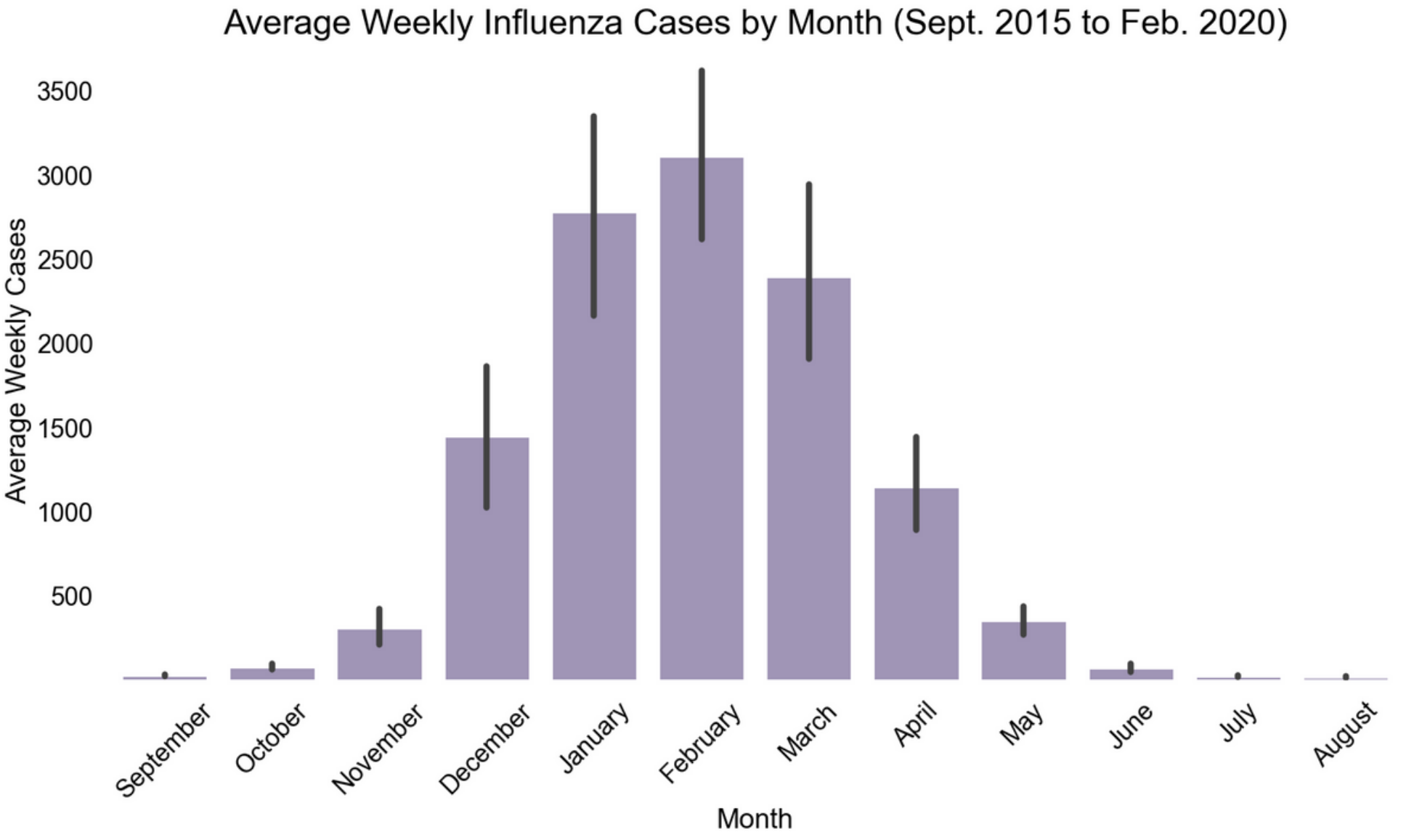
- 7,000 influenza deaths every year in Canada
- Accurate influenza predictions = more effective interventions



Influenza Cases in Canada by Subtype



Before March 2020

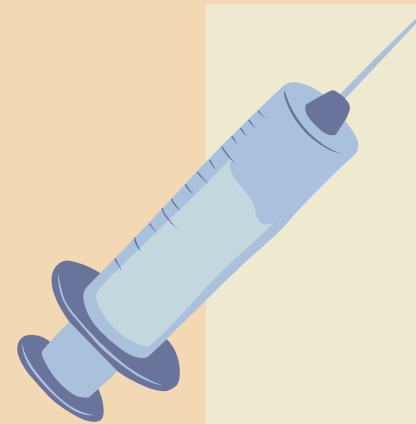


After March 2020

Correlated with Flu?



Flu Symptom Google Search



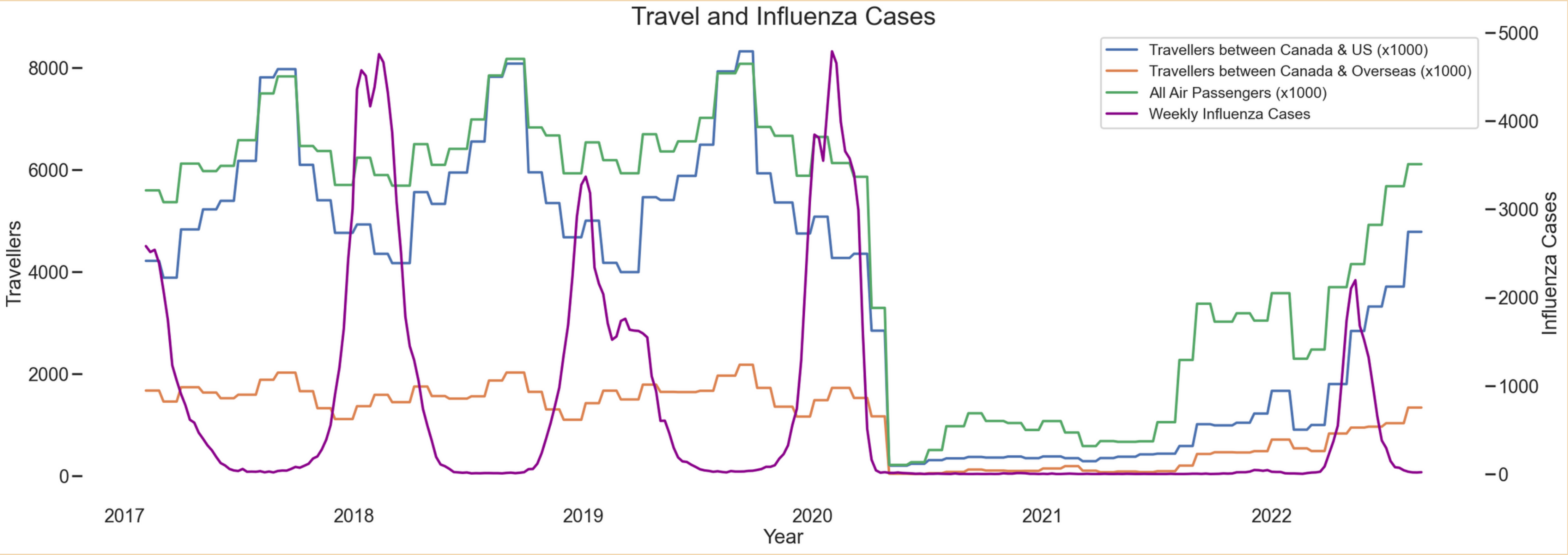
Influenza Vaccination



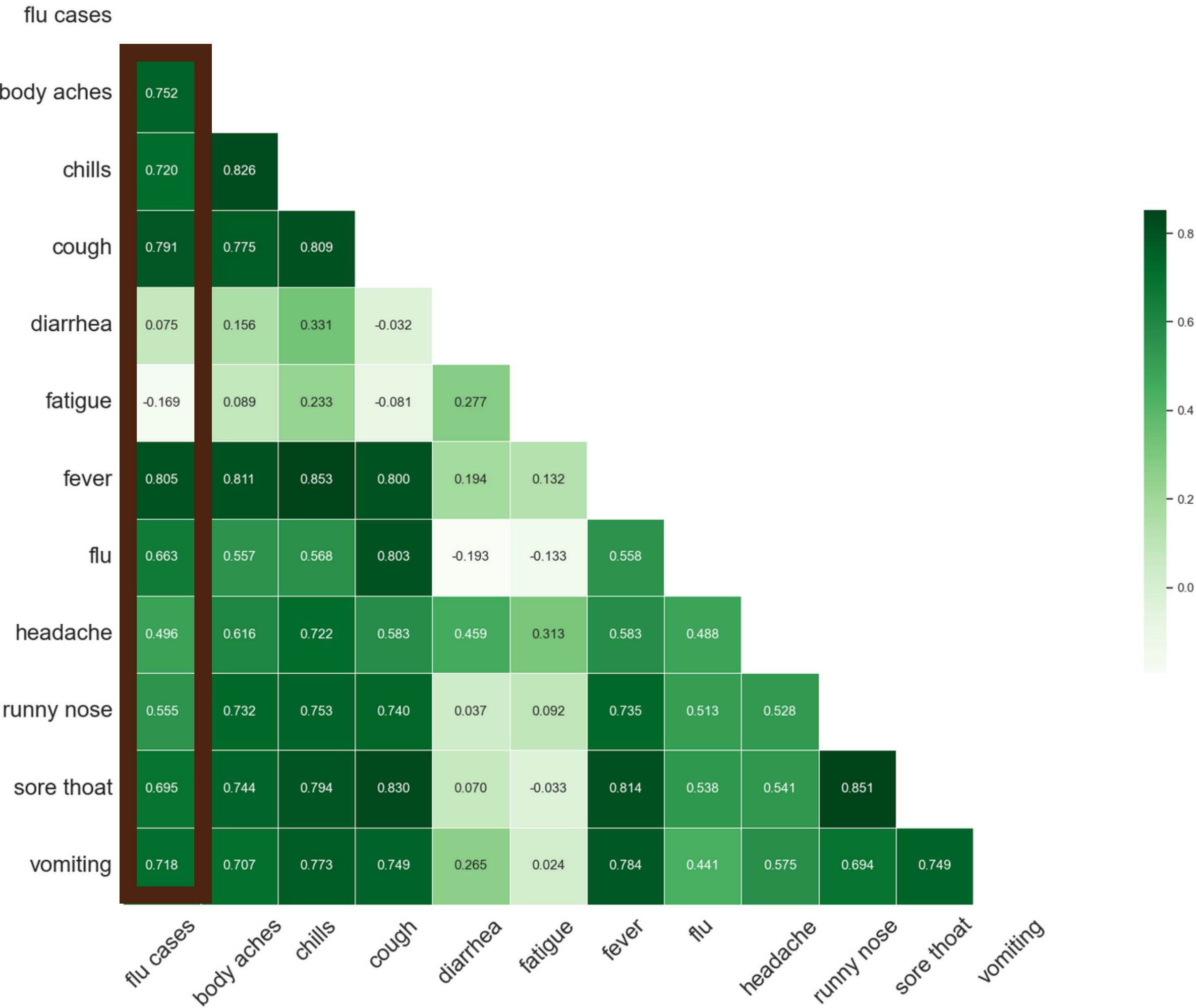
COVID Term Google Search

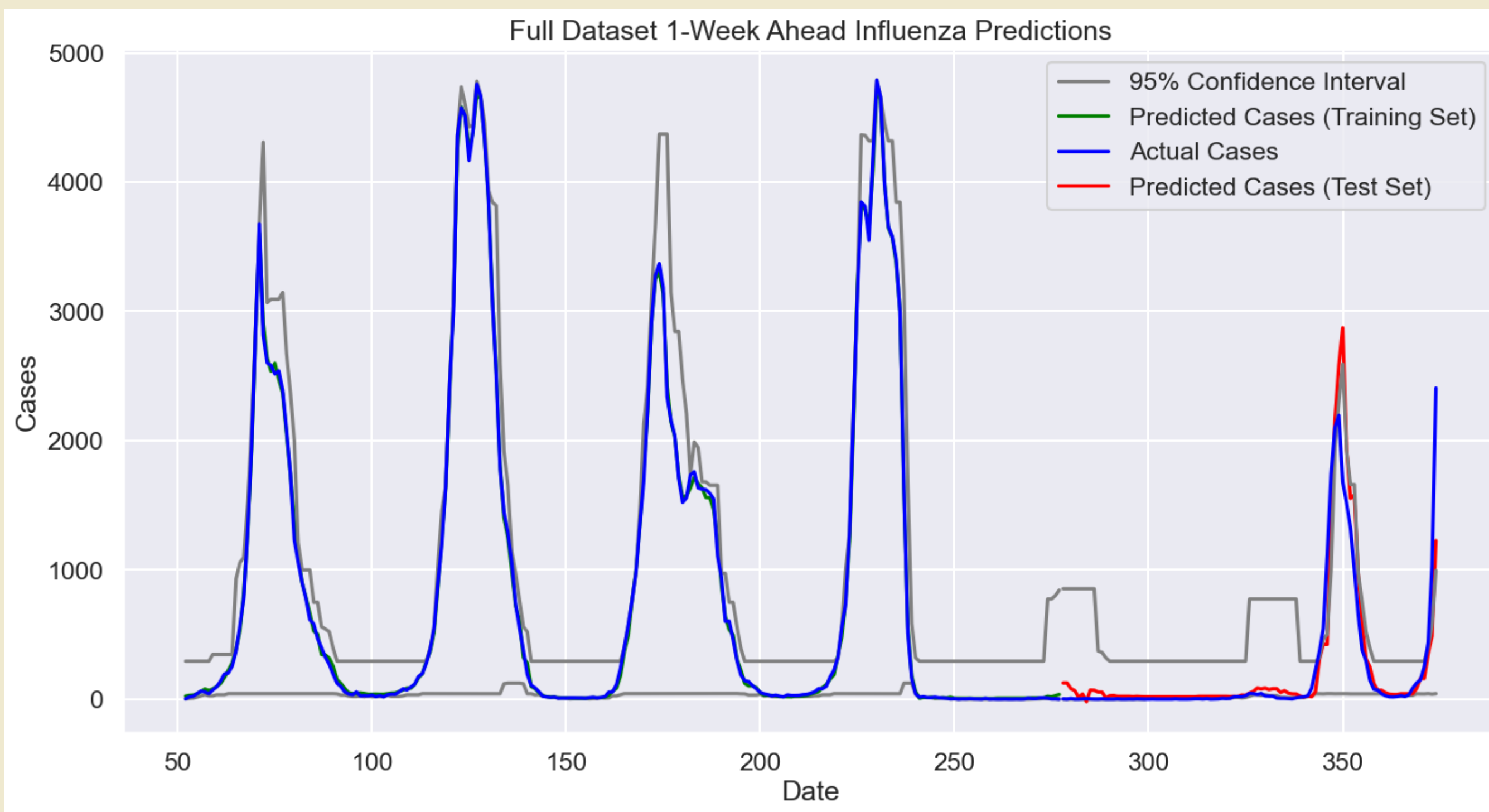
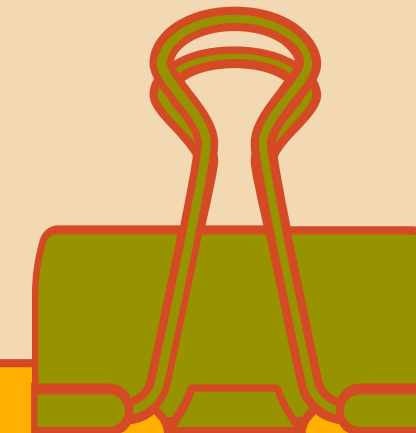
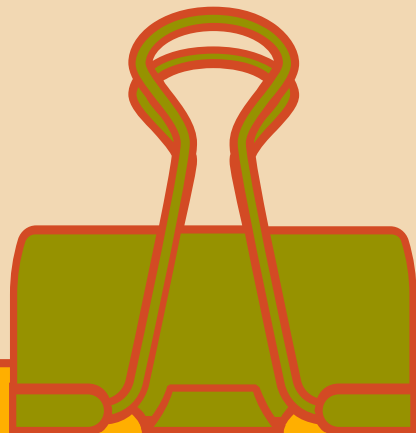


Movement of People



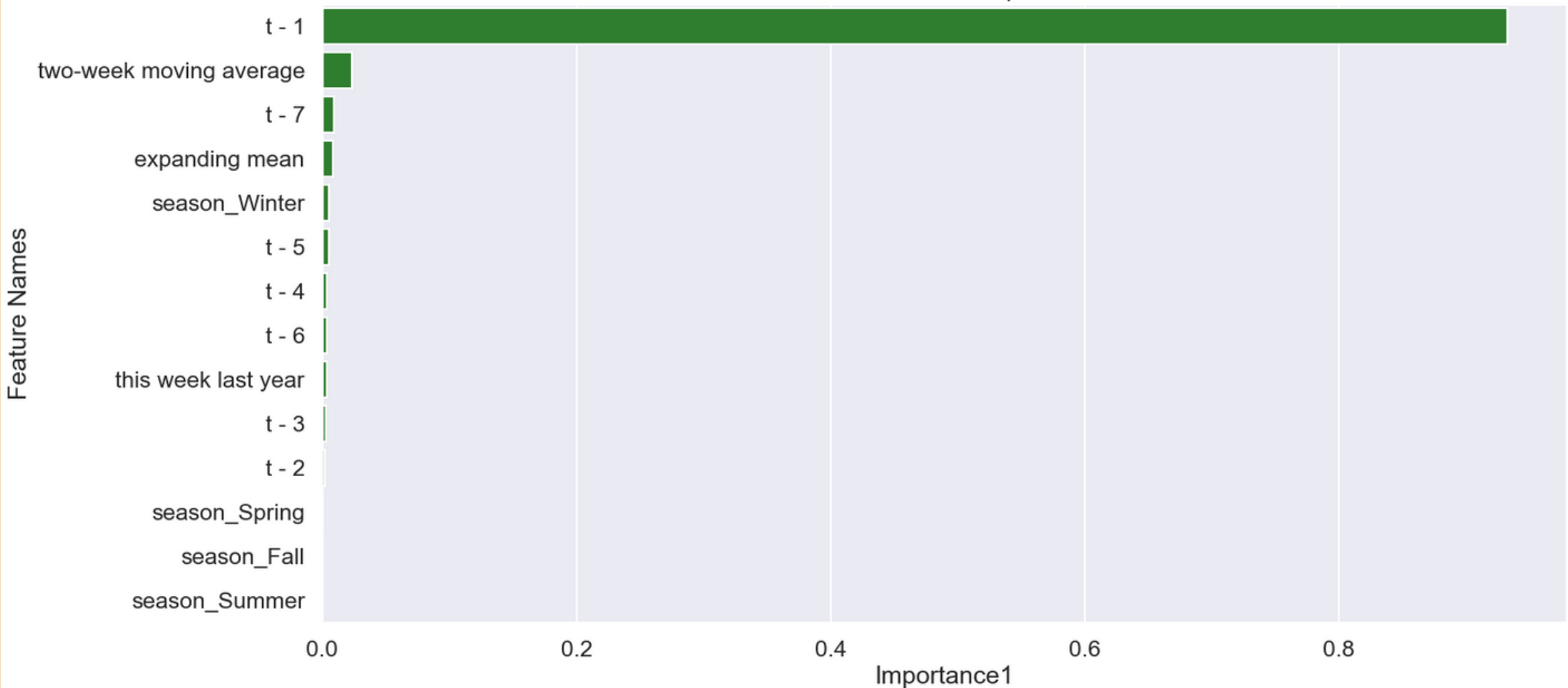
Flu Symptom Searches & Cases





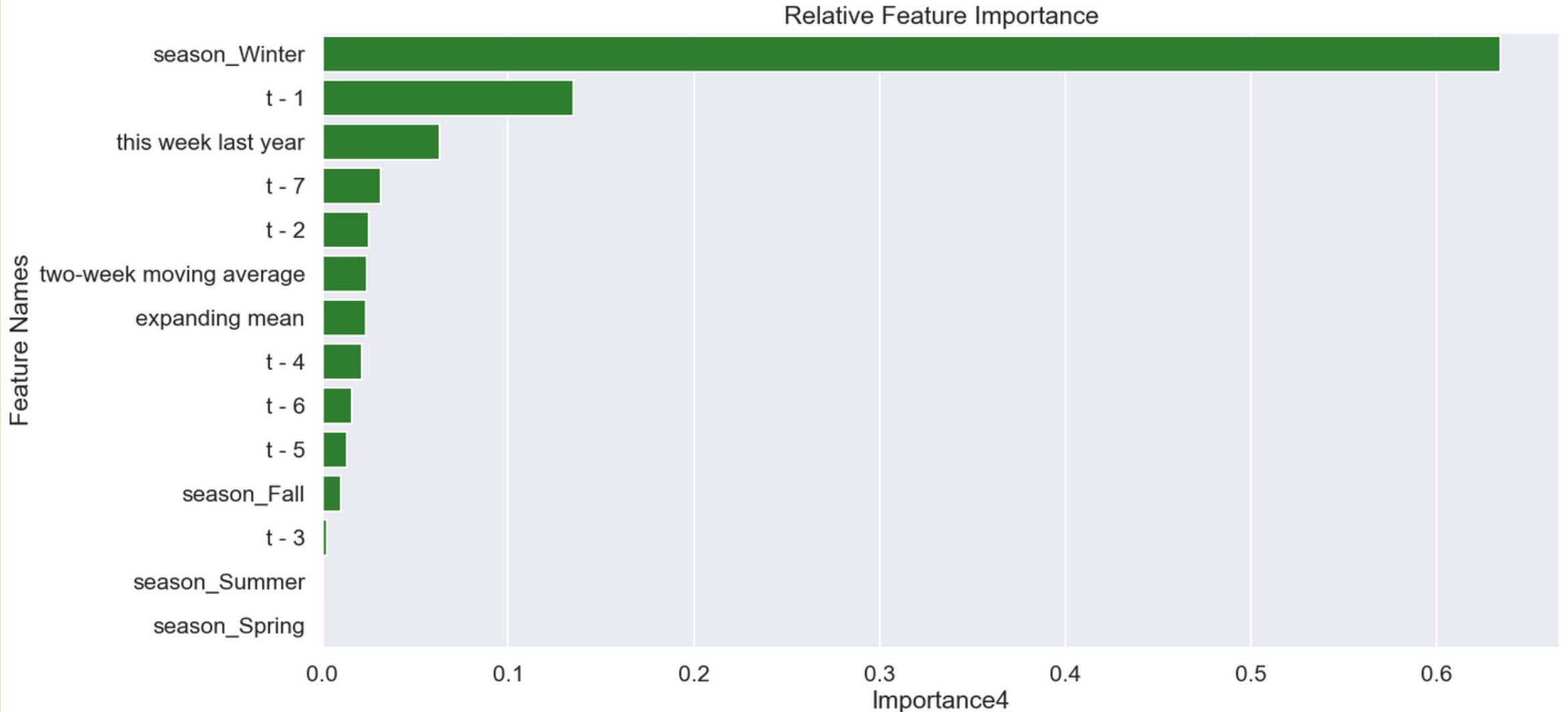
1-week forecast:

Most important feature = **previous week**



4-week forecast:

Most important feature = **winter**





Model	RMSE	MAE	R Squared
Gradient Boosting Regressor	222.63	94.66	0.81

Compared With

Baseline – Moving Average	481.41	190.93	0.73
Benchmark			0.88



Thank you for listening!

Don't hesitate to ask any questions!