

January-March 2024 Northern Michigan Search Interest Forecast

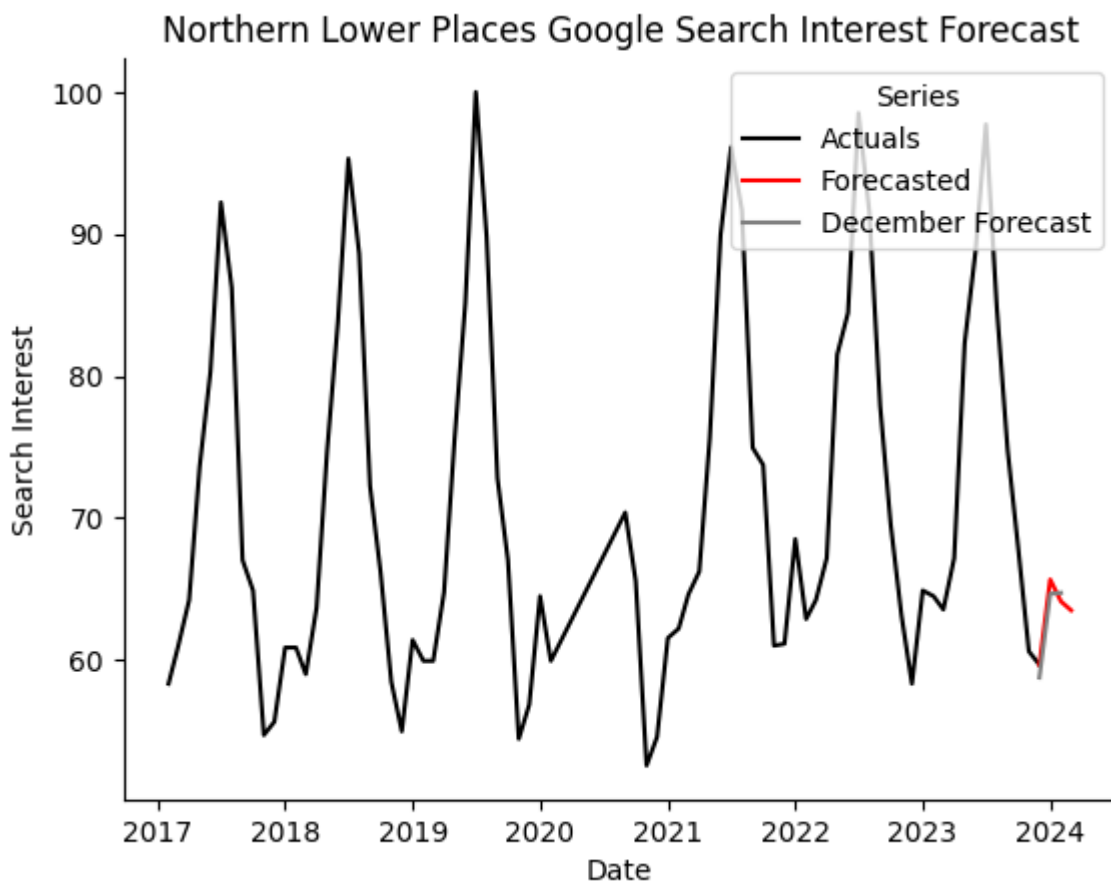
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Below are the search interest forecasts for the combined Northern Lower and combined Upper Peninsula places for January, February, and March 2024. Note that the possible range for historical search interest is normalized to a maximum of 100, but forecasts outside this range are permissible as these values are forecasted to be outside the historical range.

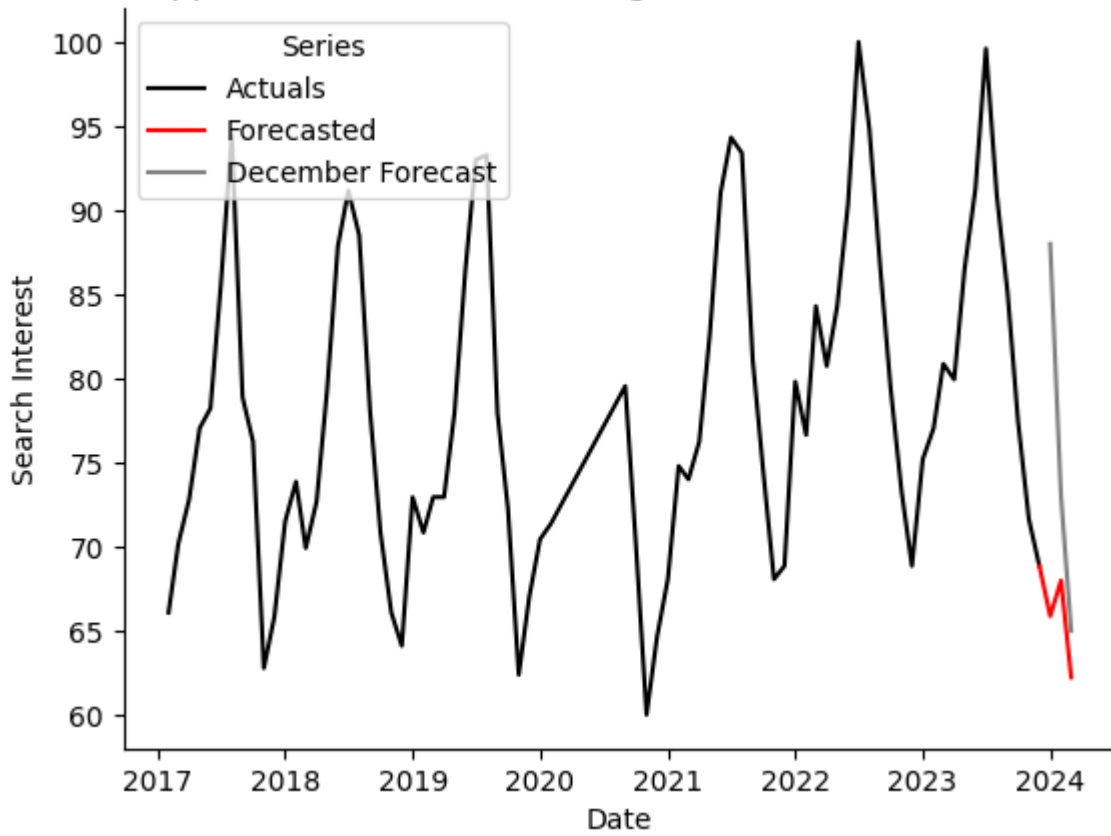
Also provided are barcharts comparing the average search interest for the forecast months (January, February, March) to the same months in previous years.

The forecast for the Upper Peninsula is slightly lower relative to past years while the Lower Peninsula is about the same.

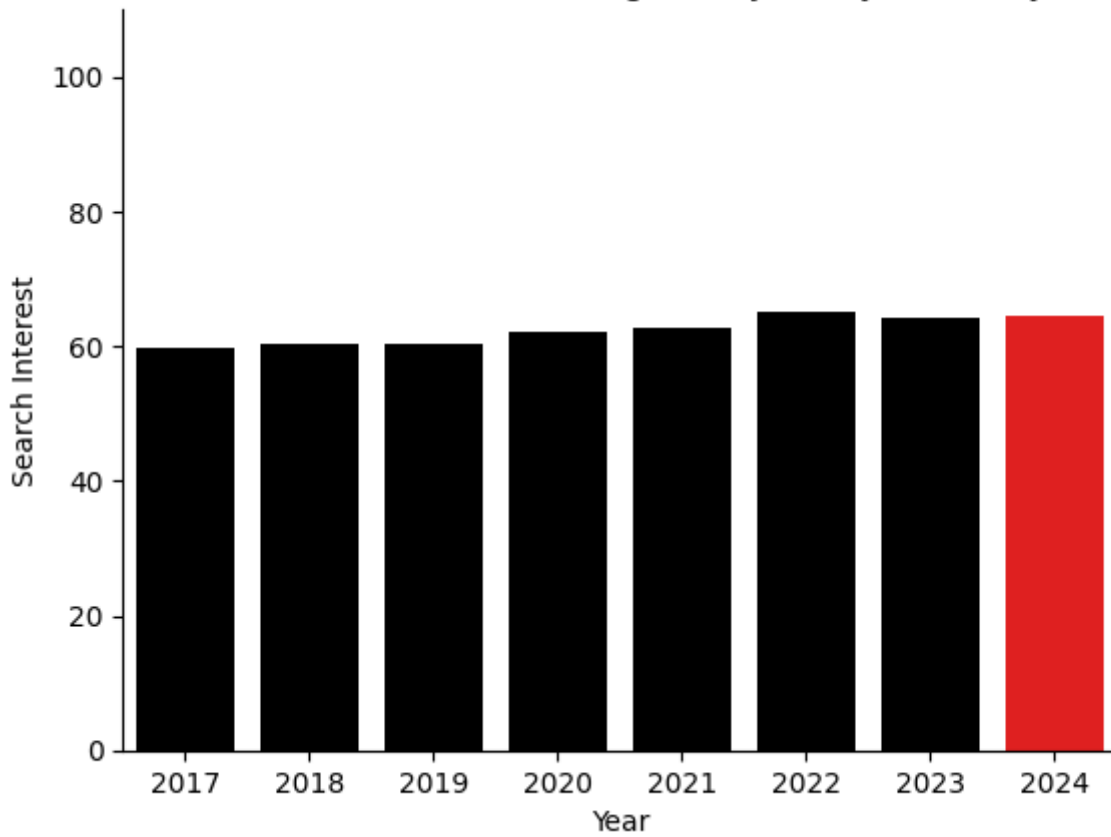
Also shown is the previous forecast from December. For the Lower Peninsula, this forecast is extremely similar to the current forecast. For the Upper Peninsula, the new forecast is lower from last month. Last month's last actual was high and a positive change was forecasted. The actual value for December ended up lower and a small negative change is now expected.



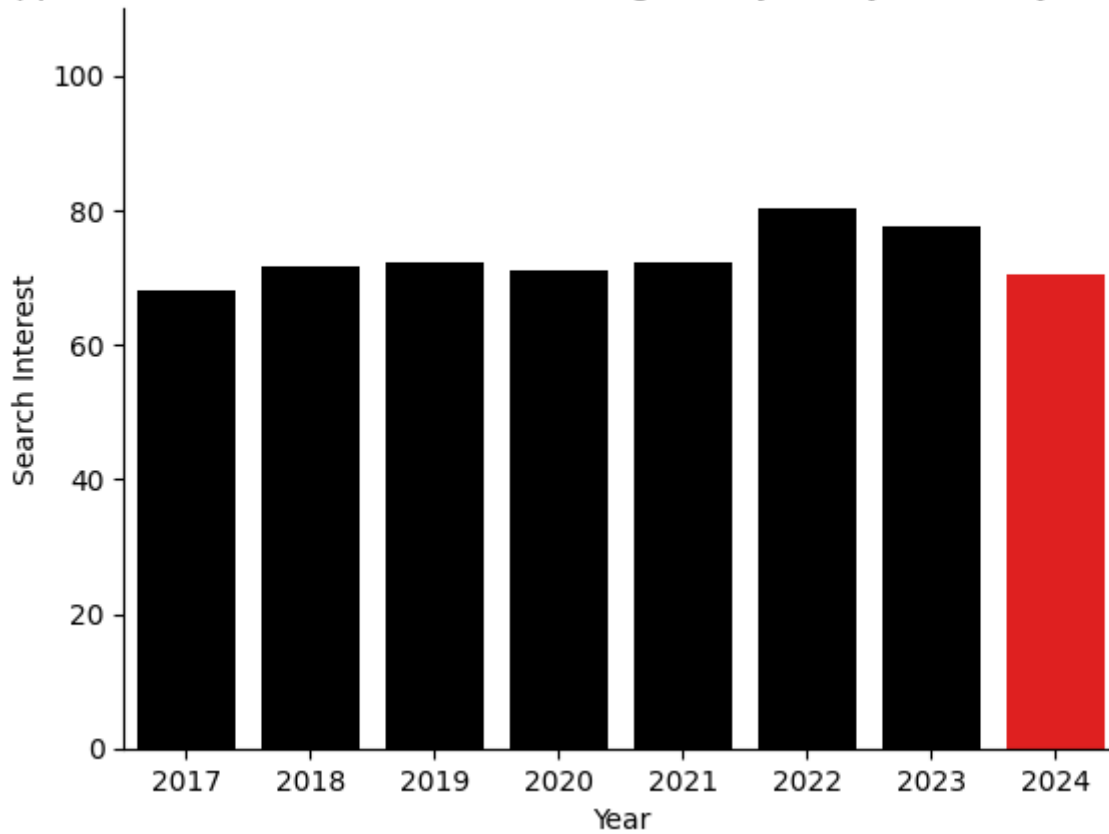
Upper Pensinsula Places Google Search Interest Forecast



Northern Lower Search Interest Averaged for January, February, and March



Upper Peninsula Search Interest Averaged for January, February, and March



The following table shows the top five places that are forecasted to have the highest search interest compared to the same time period in 2023. Caberfae is associated with a ski resort. Last month, I previously thought 'Pilgrim' showed high levels due to the word 'Pilgrim' being associated with Thanksgiving in November. The last actual is now December. It's possible people are still searching for 'pilgrims' in December but, regardless, the place Pilgrim is near Lake Michigan. Parkdale is also. Brutus is on a cross roads between Petosky and Mackinaw City. Bessemer is near the border with Wisconsin. All in all, it would seem that the Northwest Lower Peninsula has the places with the highest extreme forecasts.

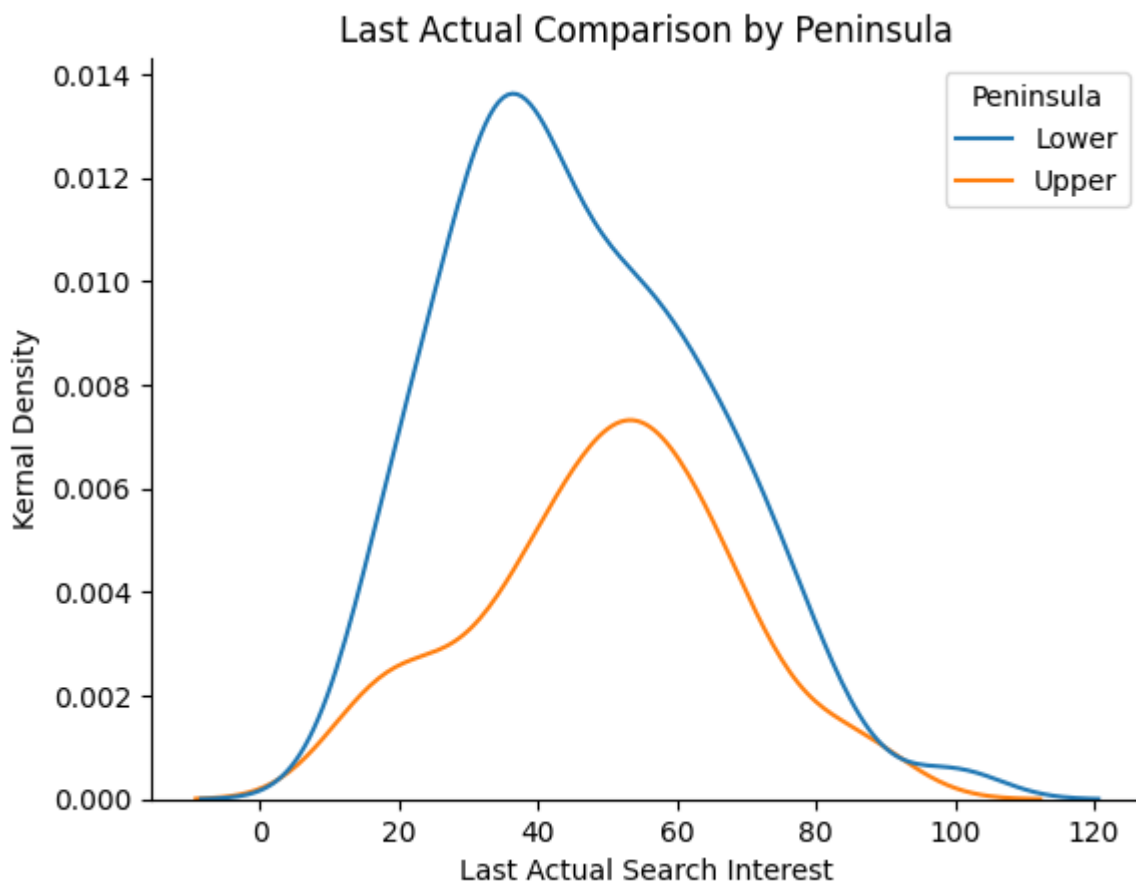
	Place	Peninsula	Difference
0	Caberfae	Lower	44.0
1	Pilgrim	Lower	30.7
2	Parkdale	Lower	30.5
3	Brutus	Lower	26.4
4	Bessemer	Upper	25.6

Three things impact the value of the search interest forecasts for each place.

1. The last available monthly value: since models are differenced, it matters how high the last month's value is
2. Seasonality: if search interest is typically high during a month, it will be forecasted to be high again

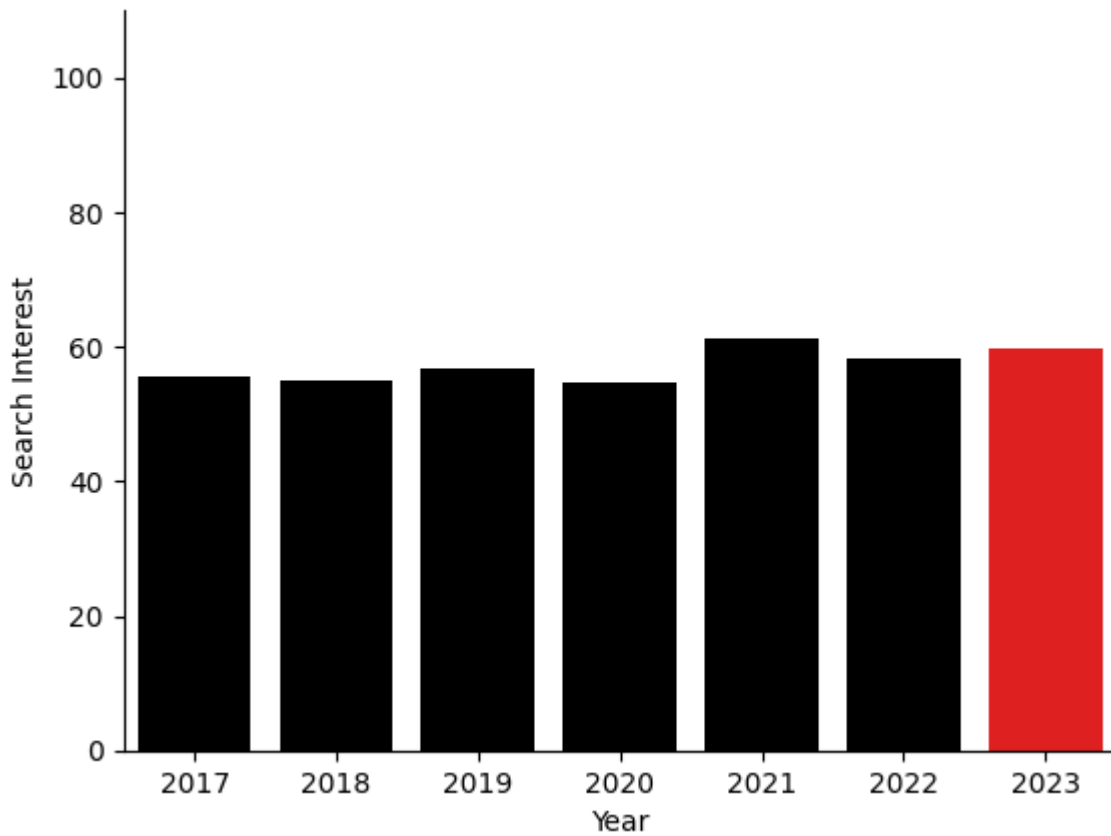
3. Model difference: based on forecasted atypical weather and gas price changes, the model will predict the deviation from historical and seasonal values.

The following shows last actual values for December 2023 for search interest in the Lower and Upper Peninsula. The distribution of last actuals is higher for the Upper than the Lower Peninsula. Note that due to kernel smoothing the plot shows values outside of 0-100 which are the possible values.

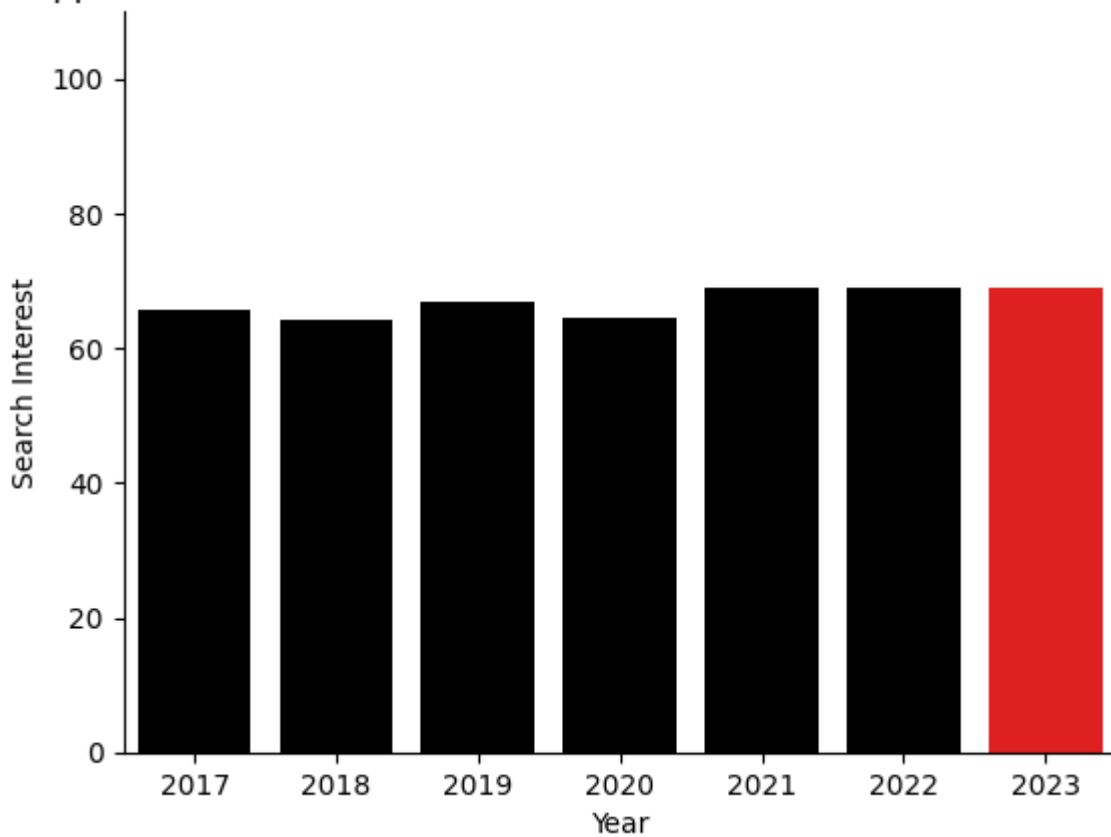


The last actuals used in the aggregate forecast are from the aggregate series. These charts compare the aggregate last actual for both peninsulas to previous values in December. For the Lower Peninsula, the last actual is similar compared to the last several years. For the Upper Peninsula, it is similar also.

Northern Lower Last Actual Search Interest versus Previous Decembers

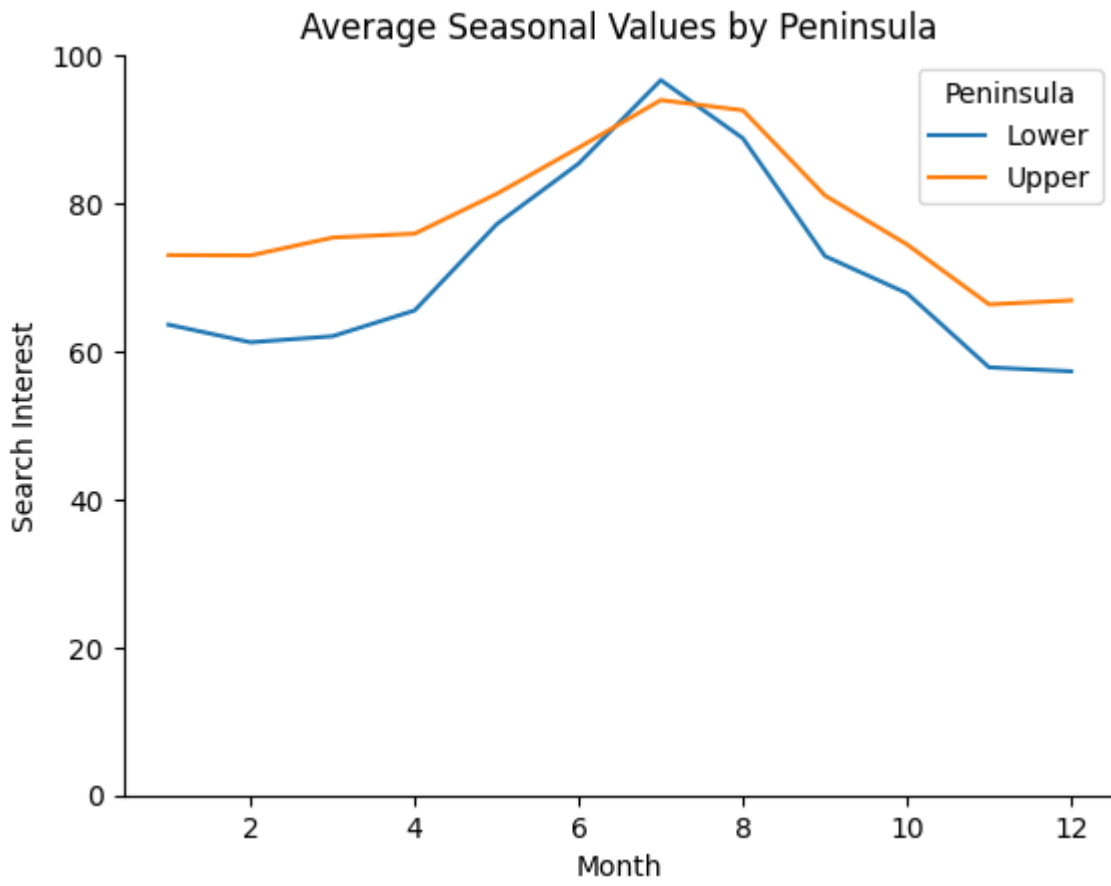


Upper Peninsula Last Actual Search Interest versus Previous December

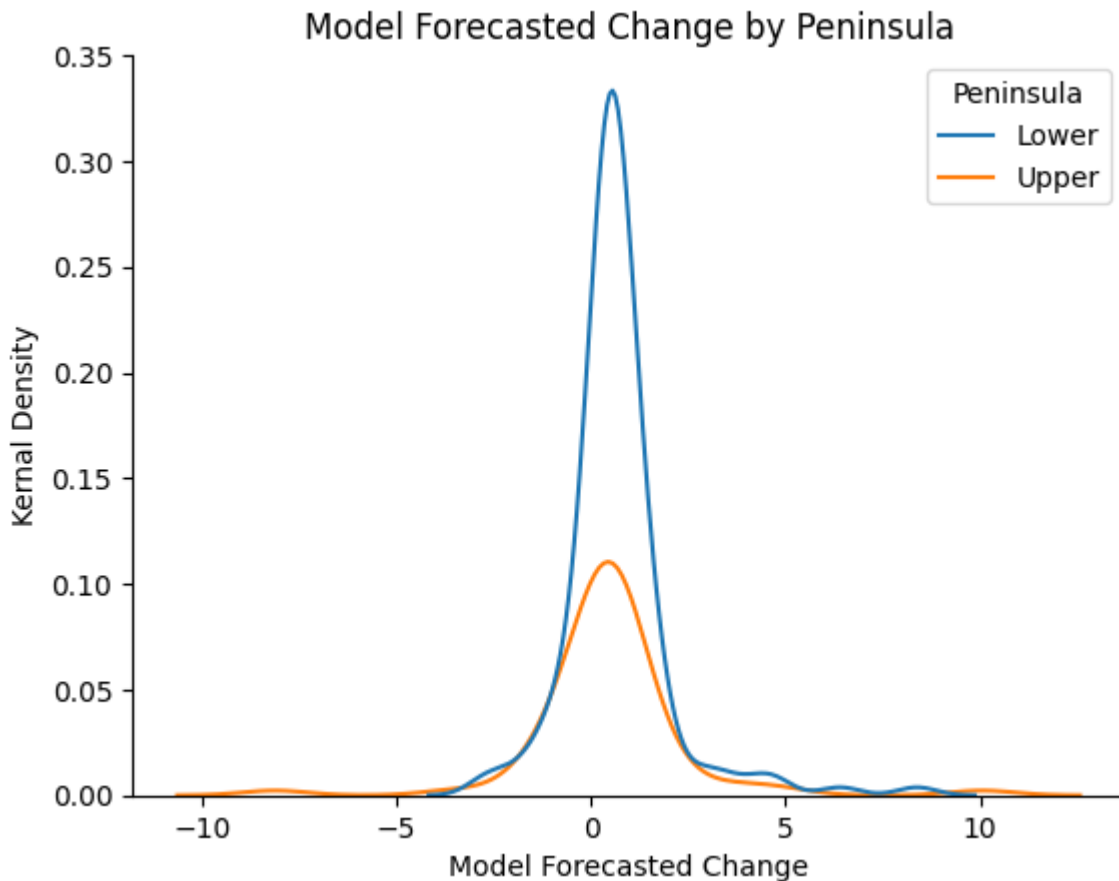


The following figure shows the aggregate average search interest for each month. Both the Upper and Lower Peninsulas have a seasonal peak in July/August with the Lower Peninsula peak solidly in July. The Upper Peninsula values have higher values for January-March likely due to winter snow

sports like snowmobiling. For the January-March forecast period, we should expect some of the lowest search interest values for the Lower Peninsula.



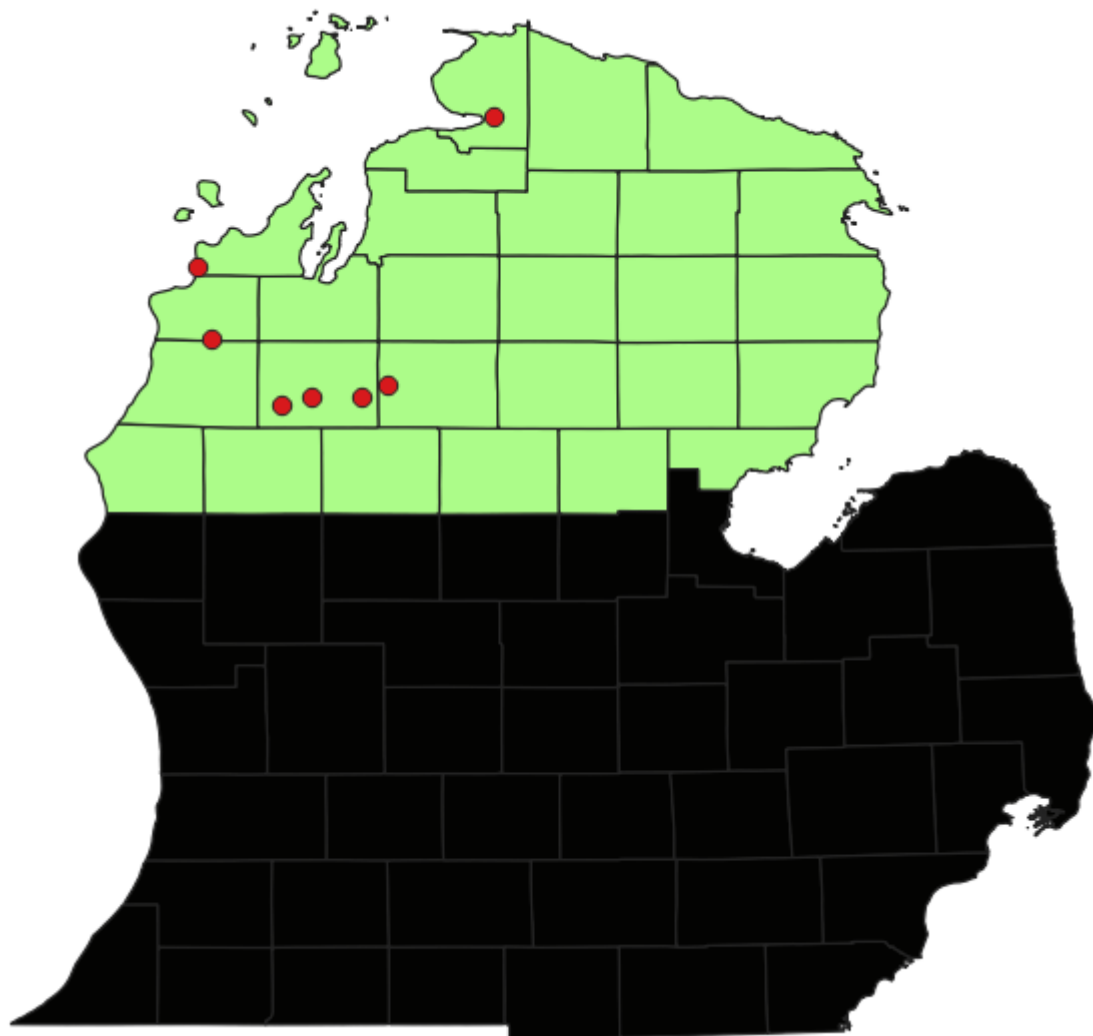
Finally, forecasts are determined by the forecasted place level change based on weather and gasoline prices. For both peninsulas, the most likely forecasted change is near zero but slightly positive.



January Forecast Edition: Lower Peninsula Places with High January, February, March Search Interest

The most striking feature of search interest is the seasonality which favors the summer months. This is especially the case for the Lower Peninsula. Anecdotally, many Lower Peninsula locations receive a lot of visitors in January, February, and March due to interest in winter sports such as snowmobiling, ice fishing, and skiing. It's likely that much of this interest doesn't show up in search interest for cities and towns. Instead, many of these tourists are possibly consistent yearly visitors who do not websearch their plans. Further, they are potentially more likely to websearch natural areas than towns and cities.

Nonetheless, I have identified seven Lower Peninsula towns and cities that show relatively high search interest for January, February, and March. These are relatively small towns located in the western counties of the region. Since these places have low relative search interest overall, they are only lightly represented in the aggregate Northern Lower Peninsula trend.

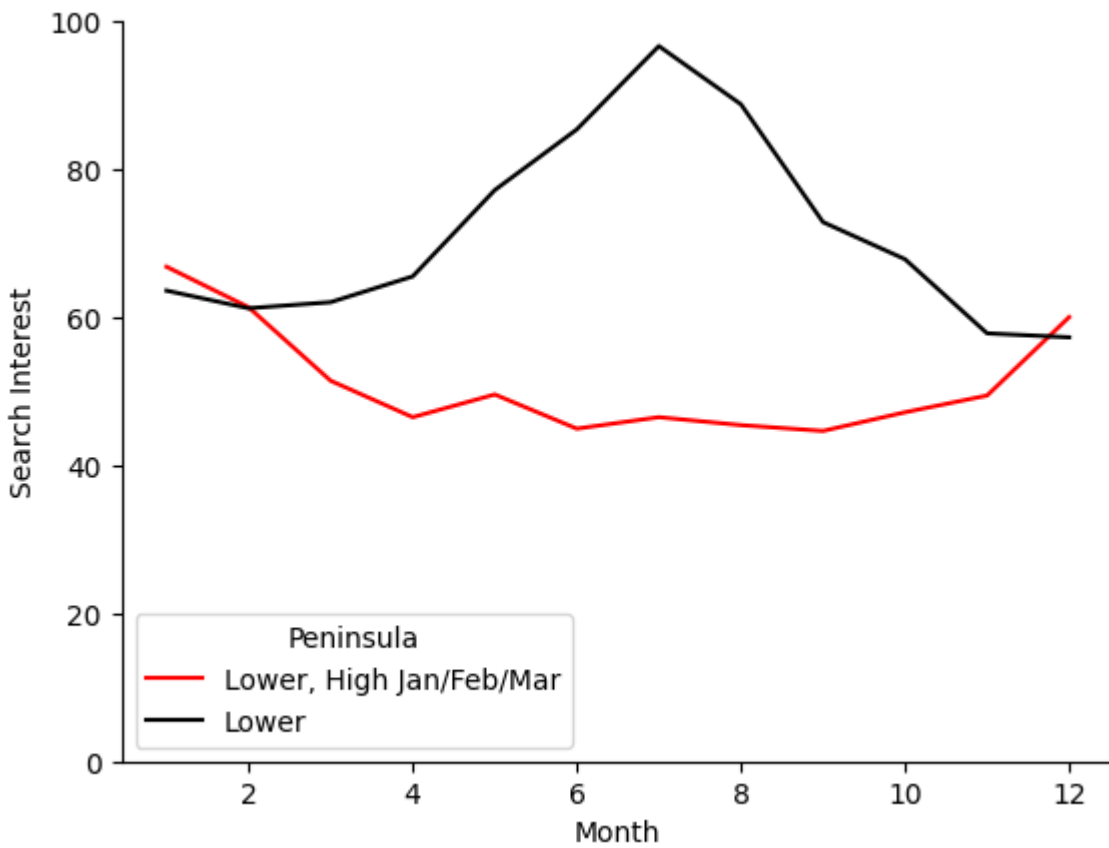


The list of seven identified places is below. Two places, Caberfae and Crystal Mountain, are known for skiing. Boon is located in the Manistee National Forest which has trails for snowmobiles (and ATVs). The other places are small towns located near inland lakes. These smaller towns generally get less search interest, except in the winter when ice fisherman want access to these lakes.

High Winter Interest

0	Caberfae
1	Conway
2	Crystal Mountain
3	Empire
4	Jennings
5	Haring
6	Boon

The figure below demonstrates how seasonality for seven places with high January, February, and March search interest (in red) differs from the overall Northern Lower Peninsula trend (in black). Note that these places have higher search interest in the winter and lower search interest in the summer. This is the opposite of Northern Michigan at large.



Finally, the chart below shows the average search interest forecast for these seven places comparing January/February/March this year to previous years. The forecast for this year is high relative to past years.

High Winter Search Interest Place (7 Places) Averaged for January, February, and March

