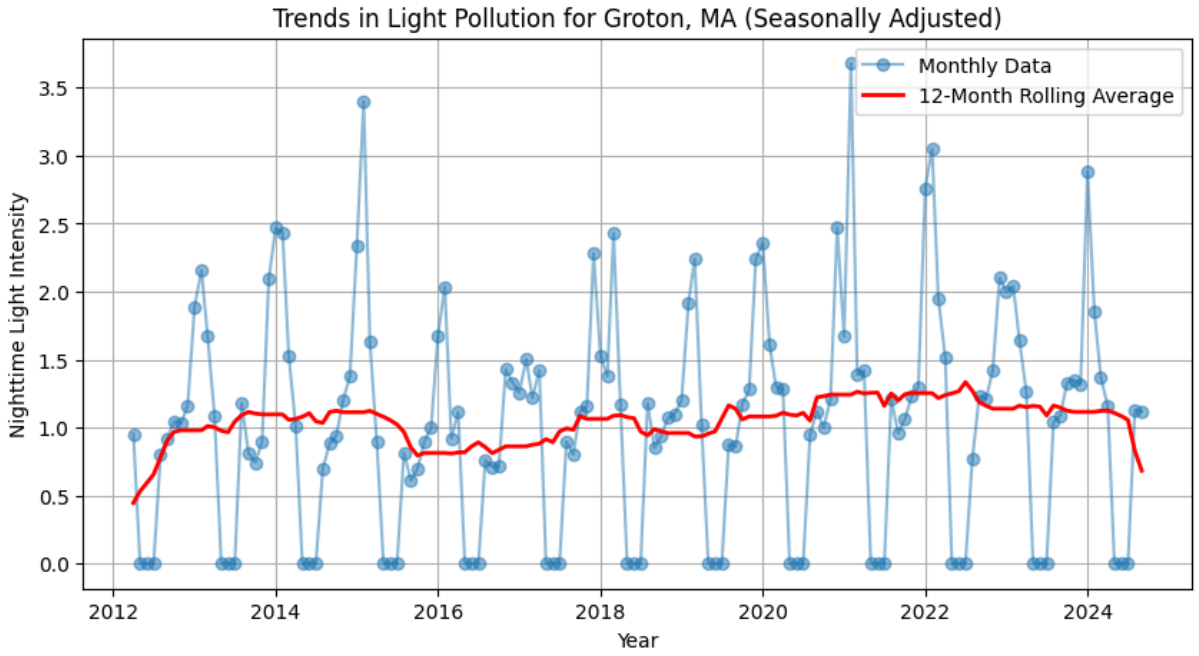
This thread piqued my interest in analyzing nighttime light intensity in Groton and nearby areas -- along with having some downtime this morning :)

I don't have experience with this topic, but I wanted to share some key findings from my amateur analysis.

Using publicly available satellite data from the NOAA VIIRS Nighttime Lights dataset, I explored trends dating back to 2012 (the earliest available data).

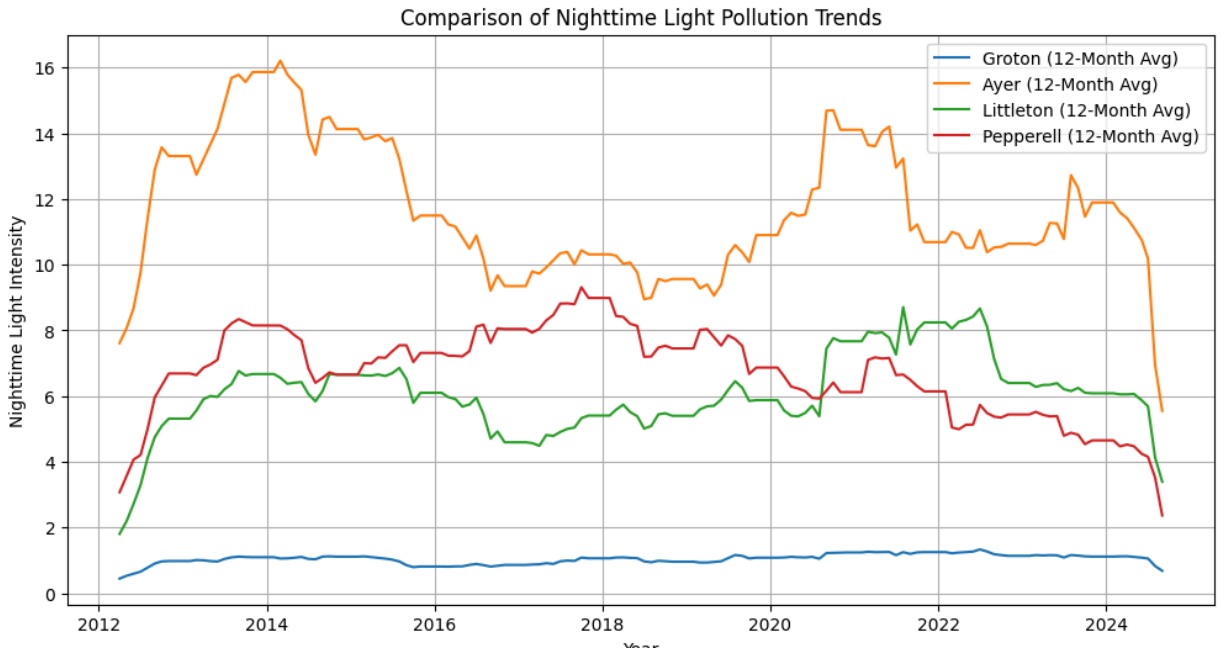
1. Nighttime Light Trends in Groton (2012–Present)

Nighttime light intensity in Groton varies seasonally, so I applied a **rolling average** to smooth out short-term fluctuations and highlight the long-term trend:



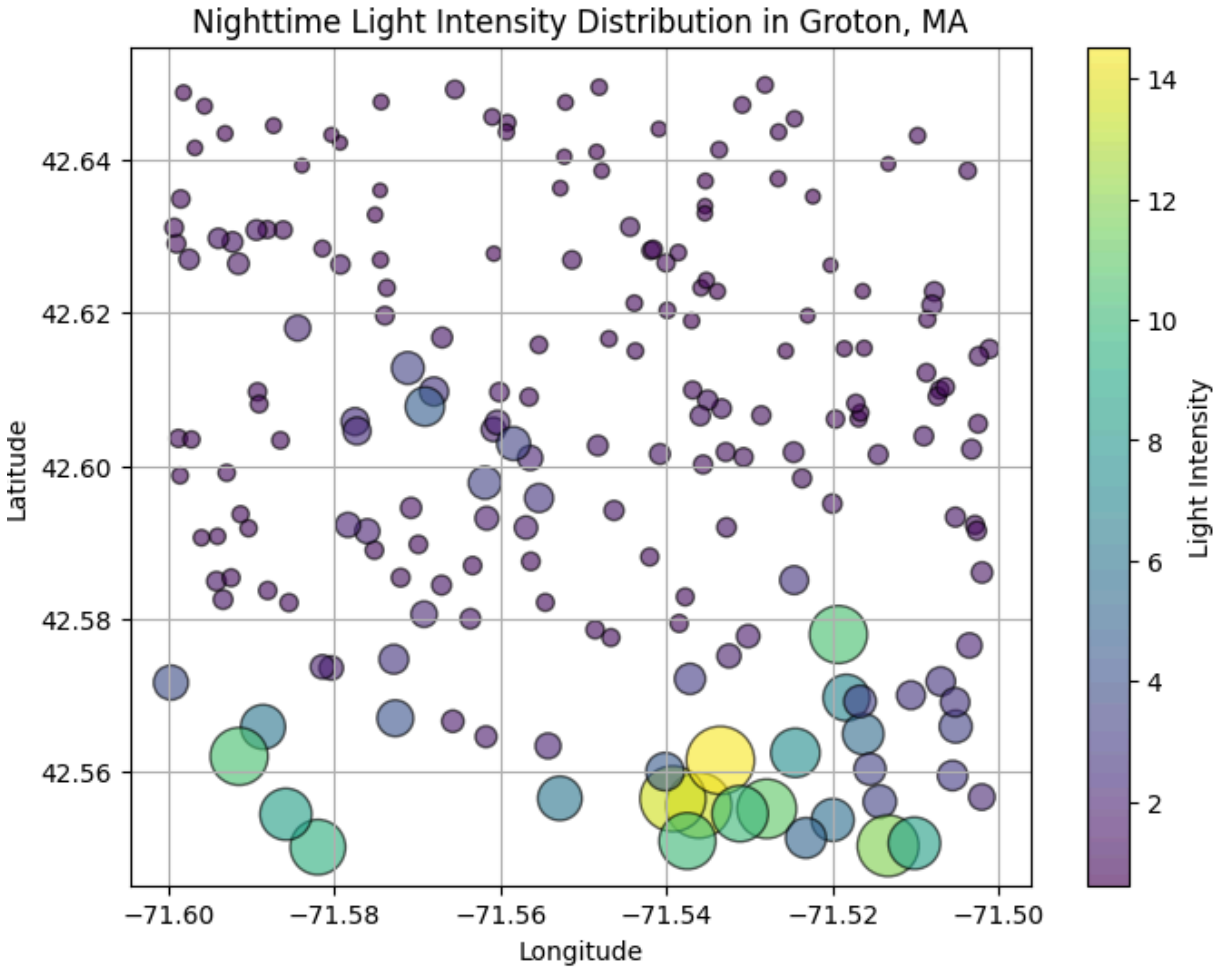
2. Comparison with Nearby Towns

To put Groton's trends into perspective, I compared its nighttime light intensity with **Ayer, Littleton, and Pepperell**:



3. Spatial Distribution of Light Intensity in Groton

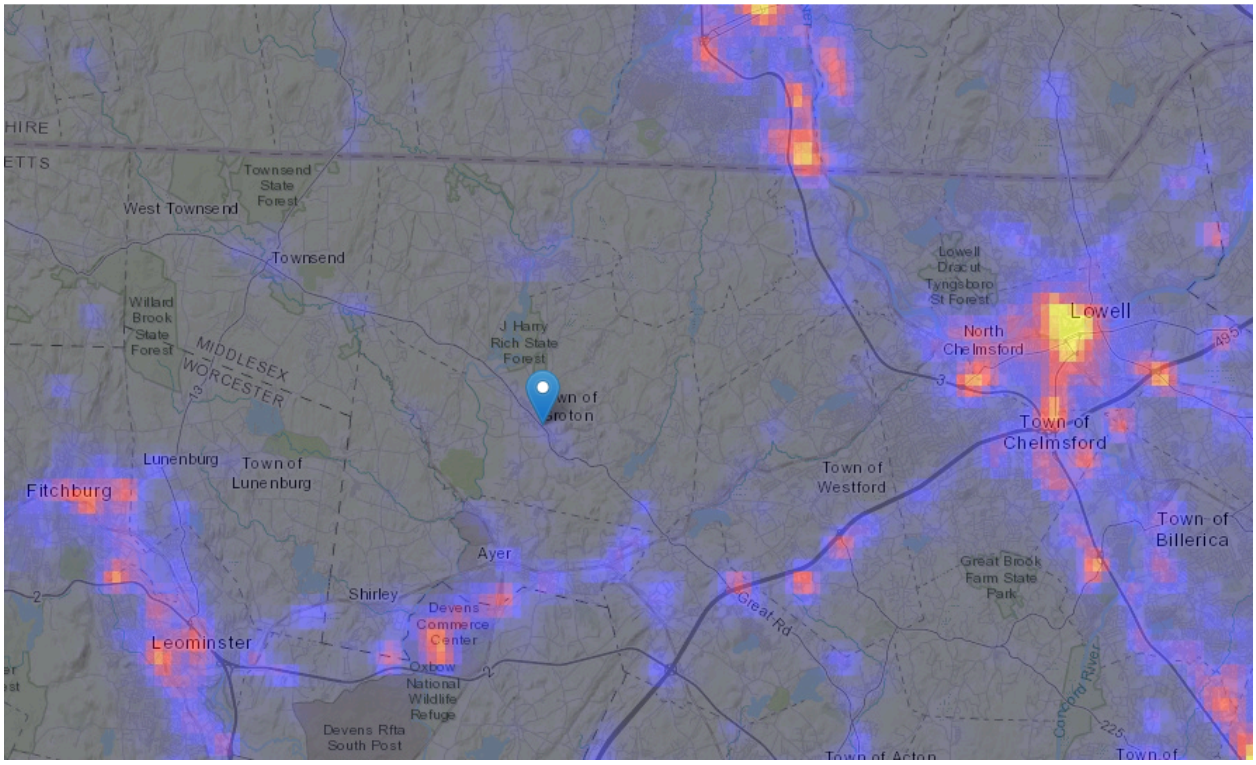
I then mapped nighttime light intensity **within Groton** using a **bubble chart**, where larger and brighter points indicate higher illumination levels:



4. Absolute and Relative Nighttime Light Intensity in the Region

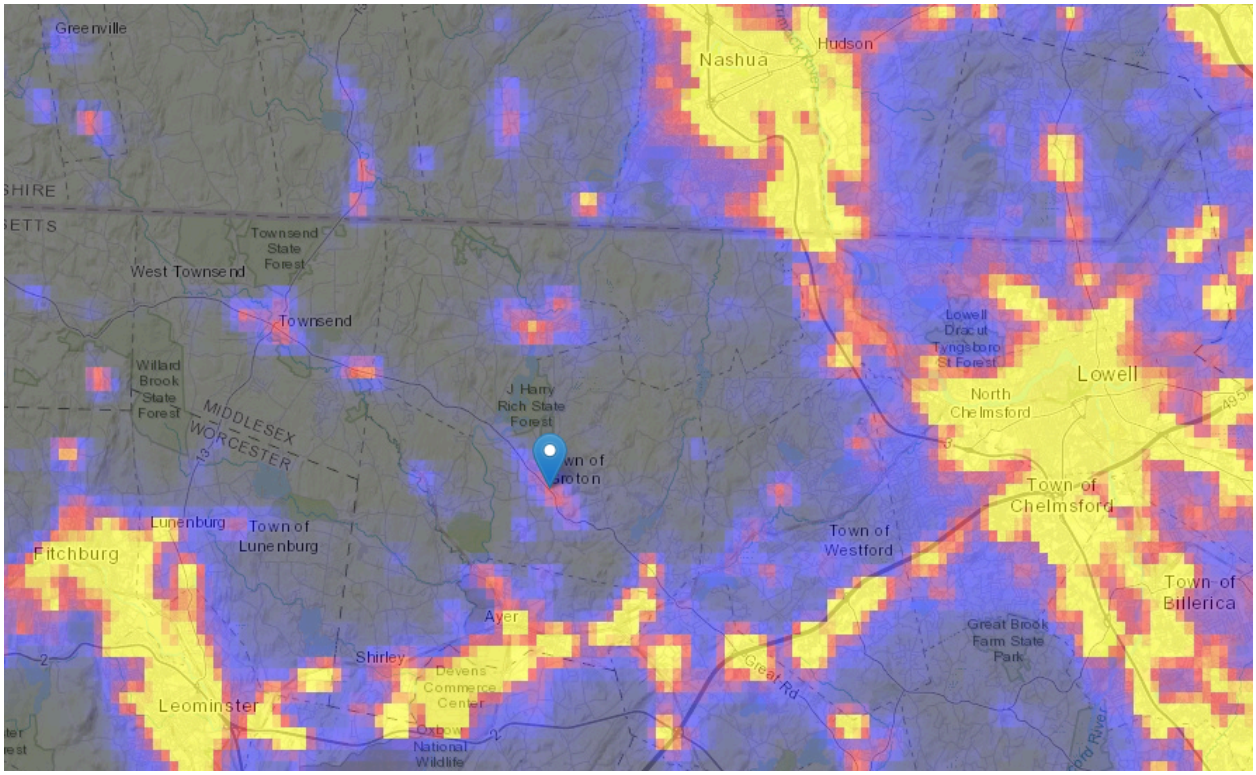
To better understand how Groton compares to its neighbors:

- I first mapped **absolute nighttime light intensity** across the region:



- Since Groton has lower overall light intensity than some surrounding areas, I also **normalized the data** to highlight how light from neighboring towns compares relative

to light from within Groton:



I've uploaded my full Jupyter Notebook with the code for this analysis to GitHub:

🔗 https://github.com/sackio/groton-darksky/blob/main/groton-nighttime-light.ipynb

I hope this analysis provides useful insights for the ongoing discussion. Again, I don't have expertise in nighttime light intensity, but I'm happy to share this data in case it helps inform future conversations.