

# 1. Data Acquisition

- **Adult Asthma Prevalence**

CDC BRFSS 2021 Table L6 (by income & state)

<https://www.cdc.gov/asthma/brfss/2021/tableL6.html#print>

- **Air Quality Measurements**

OpenAQ dataset (Global & US)

[https://public.opendatasoft.com/explore/dataset/openaq/export/?disjunctive.measurements\\_parameter&disjunctive.location&disjunctive.city](https://public.opendatasoft.com/explore/dataset/openaq/export/?disjunctive.measurements_parameter&disjunctive.location&disjunctive.city)

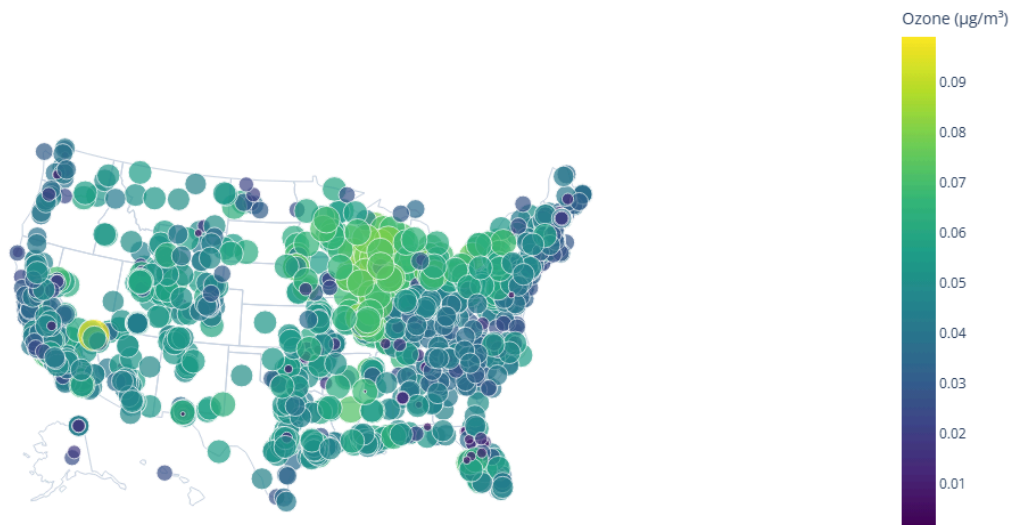
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## 2. Key Visualizations

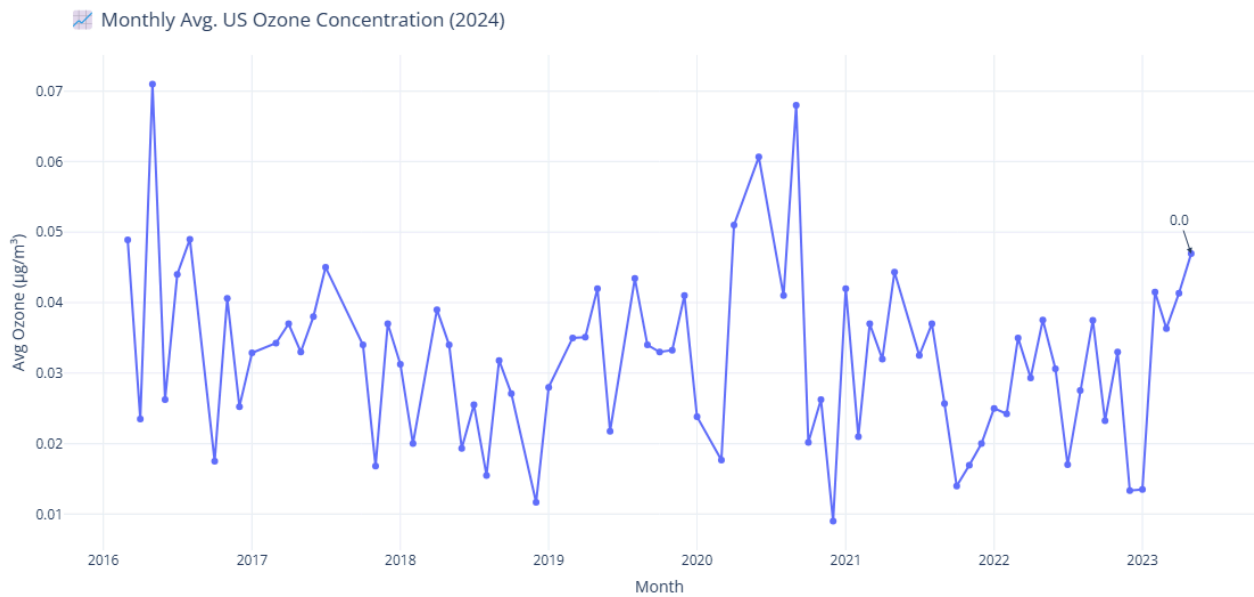
- **Figure 1. 2024 US Ozone Sensor Measurements**

Scatter-geo plot of every US O<sub>3</sub> monitor, sized & colored by reading.

🌐 2024 US Ozone Sensor Measurements



- **Figure 2. Monthly Avg. US Ozone Concentration (2024)**  
Line chart of monthly mean ozone levels with the latest value annotated.



### 3. Interactive Dashboard

All three figures have been integrated into a Flask-based dashboard:

<https://three01-final-project-v2.onrender.com/>

(Note: performance is a bit slow but fully functional.)

### Air Quality & Asthma Dashboard

Explore the spatial patterns of adult asthma prevalence (CDC BRFSS 2021) alongside U.S. ozone sensor measurements (OpenAQ 2024), and view seasonal trends in ozone concentration.

**Data sources:** CDC BRFSS Table L6 (2021), OpenAQ (2024).  
**Acknowledgement:** Jean Zhou & Nazirjon Ismoiljonov.

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