Enriching Citizen-Science with Data Storytelling Workshops
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Project Description
- We are hosting data storytelling workshops using local air quality data
- We aim to:
  - Make local environmental and civic data more accessible to residents
  - Solicit resident perspectives on bridging the gap between available data and advocacy
  - Understand the current role of data in residents’ understanding of air quality

Context and Background
- During a pilot project in 2021, we worked with local non-profit Upstream Pittsburgh and 19 citizen scientists to collect environmental data using low-cost sensing devices as part of a Social Sensing System
- We identified a need for air quality data to be contextualized towards advocacy efforts.

Project Outputs
- Conducting Data Storytelling Workshops and empowering residents to craft their own environmental data stories
- Better understanding the way residents perceive local air quality
- How much of it is informed by data?
- How can data inform their understanding?

Impact
- Empowering resident to share their perspectives on air quality in Pittsburgh
- Providing residents with tools to advance advocacy efforts
- Local Data Sources
- Data Analysis and Visualization Tools
- Storytelling Tools

Acknowledgements
- We are very grateful to citizen scientists who took part in our pilot project and Upstream Pittsburgh for their support and advocacy work in the city.

DEI Values
- While the scientific process has historically excluded people’s contributions based on race, gender, class, credentials, and methods, our framework emphasizes and empowers diverse contributions to science.
- Air pollution disproportionately impacts low-income communities & communities of color in the US. Using personal stories and citizen science, we introduce traditionally under-represented sources of data into the air quality conversation.

Figure 1: Social Sensing System - Architecture

Figure 2: Variation in local environmental data collected by citizen scientists

Figure 3: Context provided by citizen scientists for poor air quality

Figure 4: Introducing sources of local civic data and tools to understand and express them to Data Storytelling Workshop Participants

Figure 5: Example Data story based on photos taken by local citizen scientists

Figure 6: Daily Summaries sent to Citizen Scientists

Figure 7: AirNow.gov showing Particulate and Ozone Pollution in the Region

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