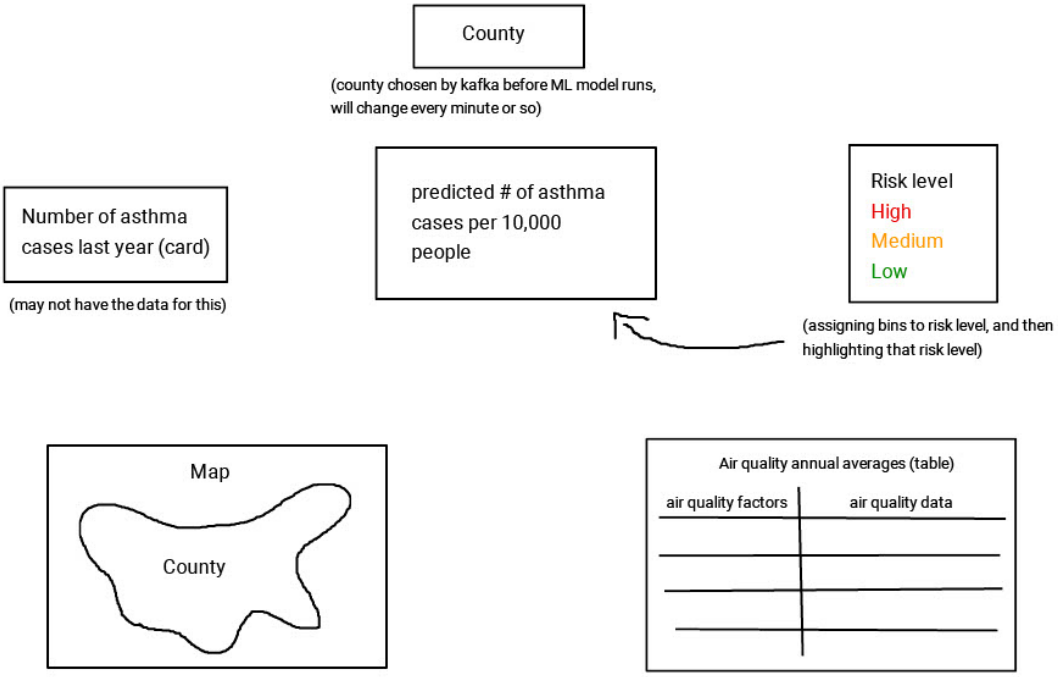
Visualizations Napkin Drawings and Feedback

First Draft:

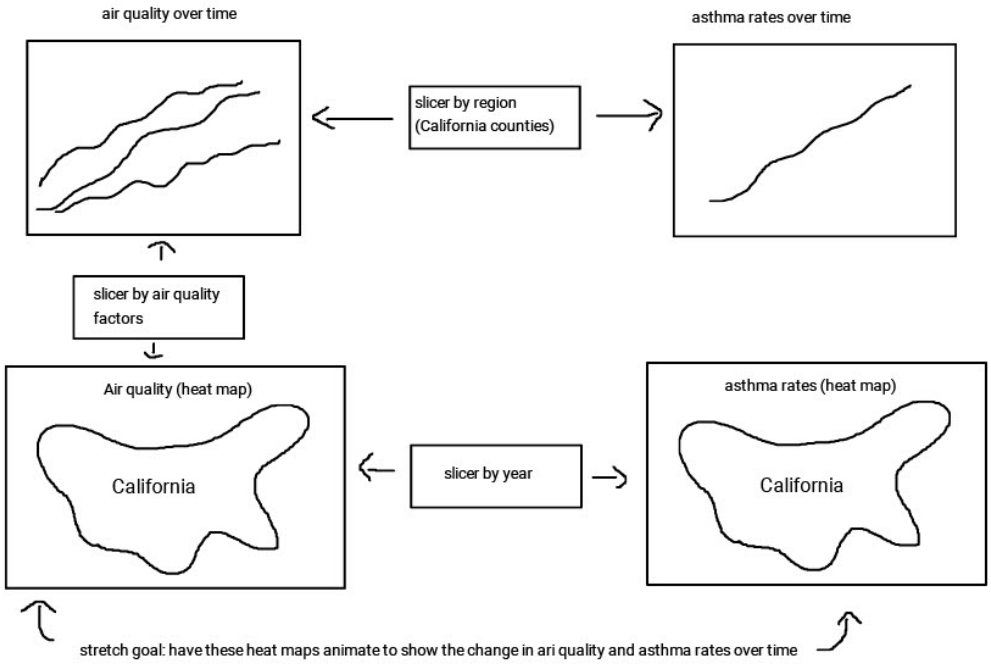
Report table of contents:

1. Highlights
2. Correlation between air quality and asthma cases
3. Correlation between manufacturing industry and asthma cases
4. Machine learning predictions

Highlights



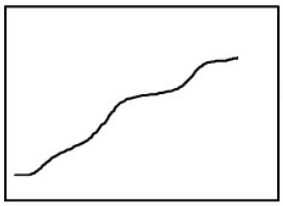
Air quality and asthma rates



Manufacturing and asthma rates

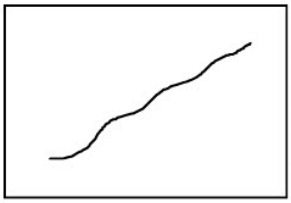
(can include a slicer for other industries as well)

number of firms in manufacturing over time

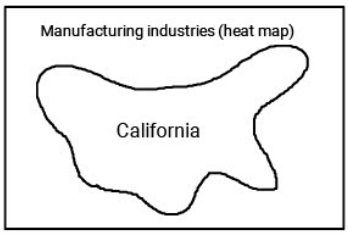


slicer by region (county)

asthma rates over time

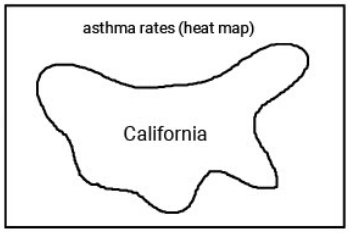


Manufacturing industries (heat map)



slicer by year

asthma rates (heat map)



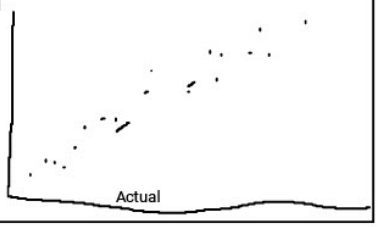
Machine Learning Model

Explaining ML Model

How well does the AQ Model predict Asthma in CA?

Top predictorss

Predicted



Possible Graphs:

- predicted vs actual
- residuals
- Correlation matrix

How well does the industry model predict asthma in CA?

Top predictors

Stretch goal

Step two Optional

Feedback for first draft:

From Yihua:

Feedback	Feedback implemented?
Highlights page:	
• Remove the card for number of asthma cases last year.	• Yes
Air quality page:	
• Overlay the two line charts and play around with the visualization settings to highlight the asthma rate line. This will make it easier to see the relationship between air quality and asthma rates.	• Yes
• Visualize the relative (percent) change instead of absolute change to standardize the axes on the new line chart.	• Yes
• Overlay the two heat maps, if possible, to see the relationship between air quality and asthma rates per county more easily.	• Yes
Manufacturing page:	
• Overlay the two line charts for the same reason above.	• Yes
• Overlay the two heat maps for the same reason above.	• Yes
Machine Learning Model page:	
• Be cautious with using the top predictors since data needs to be standardized for linear regression.	• Yes – removed top predictors section

From Group 2:

Feedback	Feedback implemented?
Highlights page:	
• Make sure to clarify what exactly the model is predicting and what features we are using to predict it.	• Yes – caption added
Air quality page:	
• Add a scatterplot to show the correlation between air quality and asthma rates. If the correlation is high, add a trend line as well to highlight the correlation.	• Yes – scatterplot added

From Group 4:

Feedback	Feedback implemented?
Highlights page:	
• Add a bar graph of counties with the highest asthma rates	• No – we are looking at all counties in the US, so the visualization wouldn't be very helpful given the sheer number of counties there are
• Pull out a highlight of the air quality data. A highlight will make it easier to see an overview of the air quality without looking at all six factors of air quality	• Yes
Air quality page:	
• Remove the air quality slicer for the line chart because you wouldn't be able to see all six air quality factors at once (given that the slicer is also used for the heat map)	• Yes

Revised Napkin Drawing:

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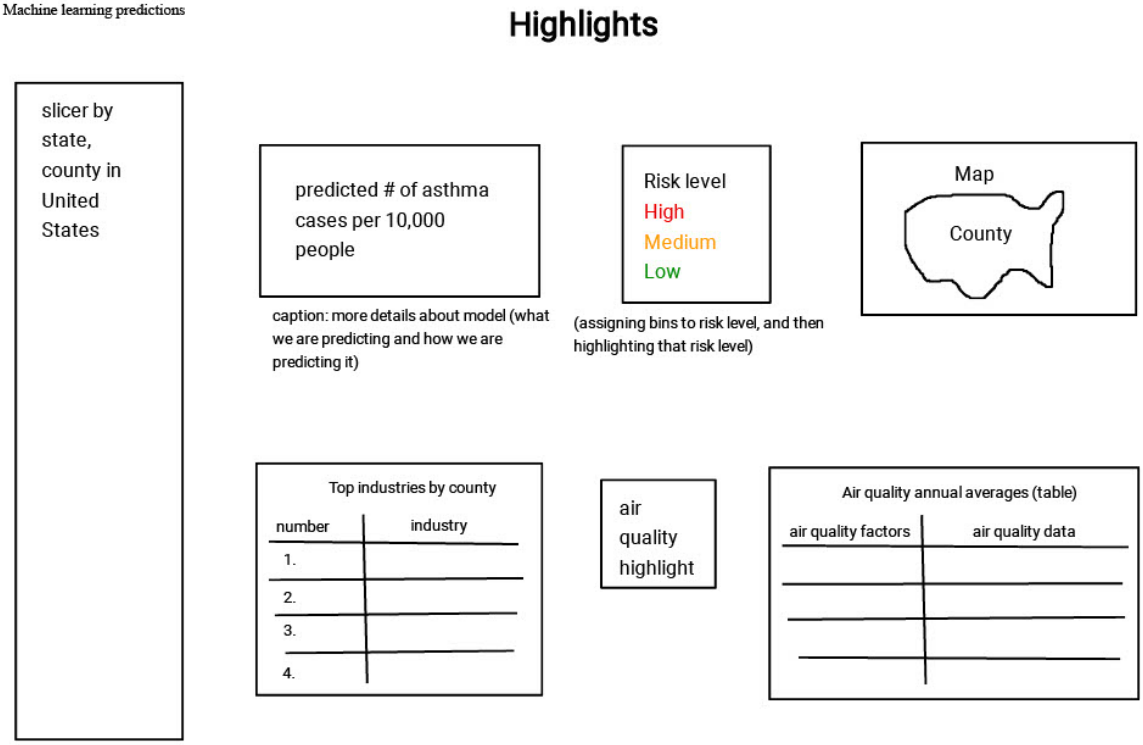
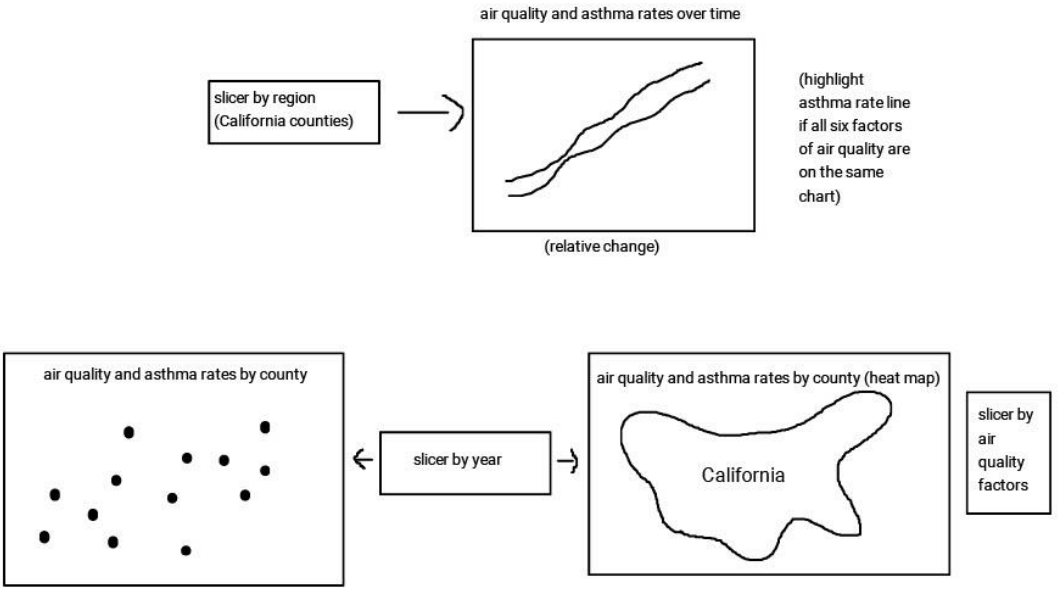
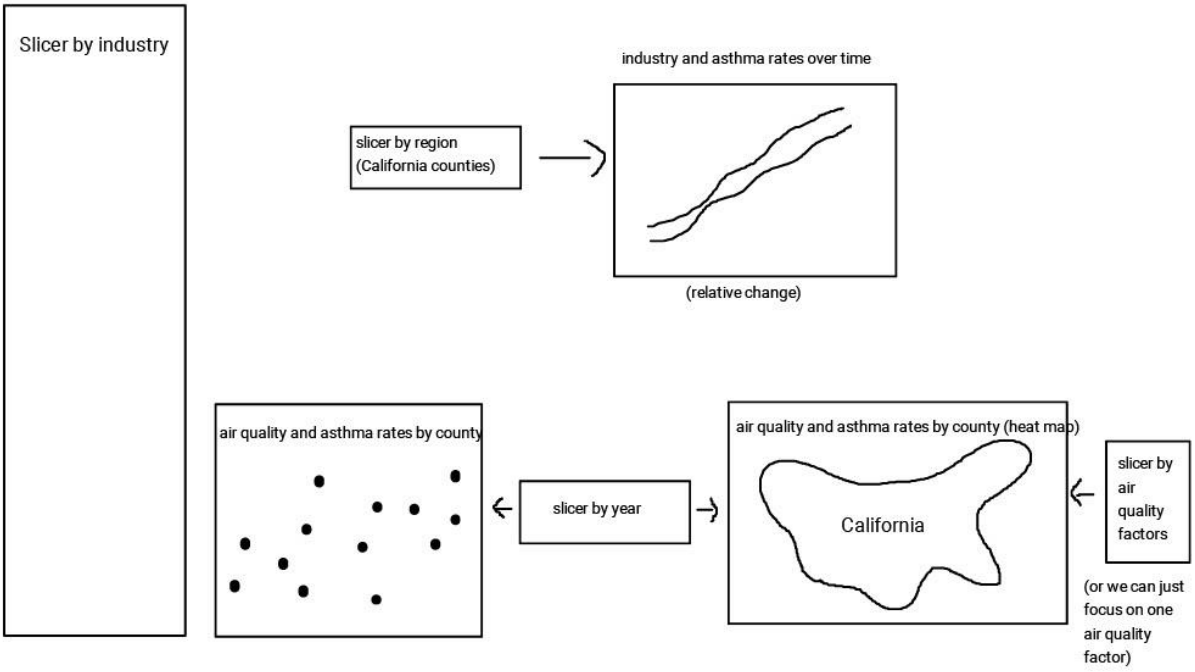




Industry and asthma rates



Machine Learning Model