

MIT COVID-19 Datathon



Track C: Disparities in COVID-19 Health Outcomes
Team 006

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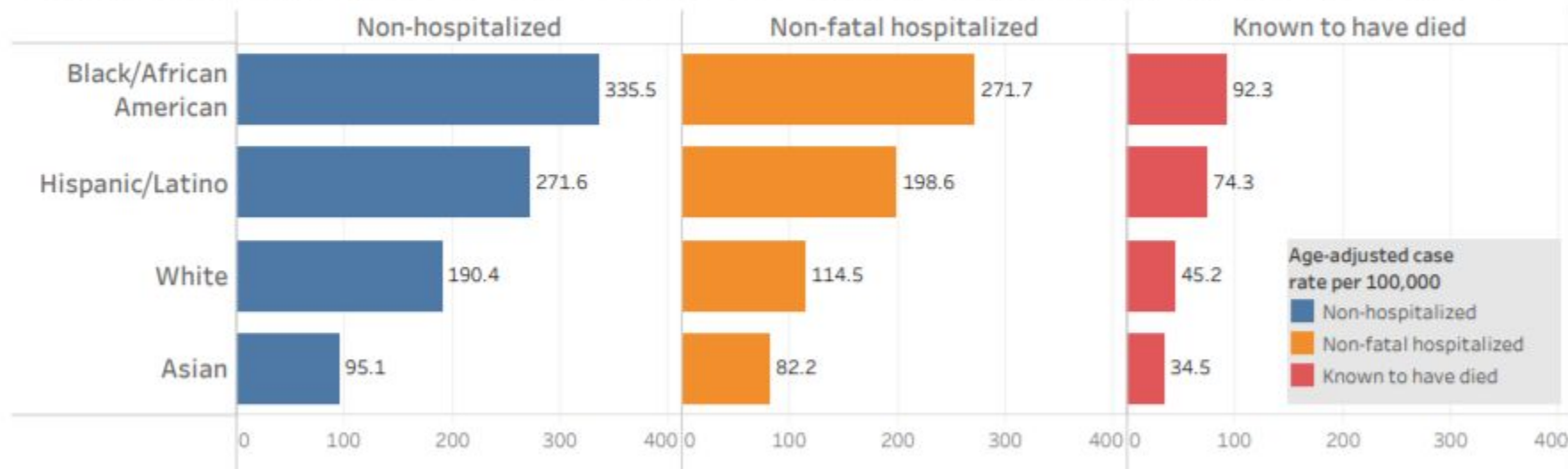
Research Question: Are there disparities in different racial and ethnic groups' ability to observe social distancing?

Hypothesis: Racial and ethnic groups differ in social distancing capabilities.

- Where it's understood that a difference in capability of observing social distancing leads to different levels of infection.

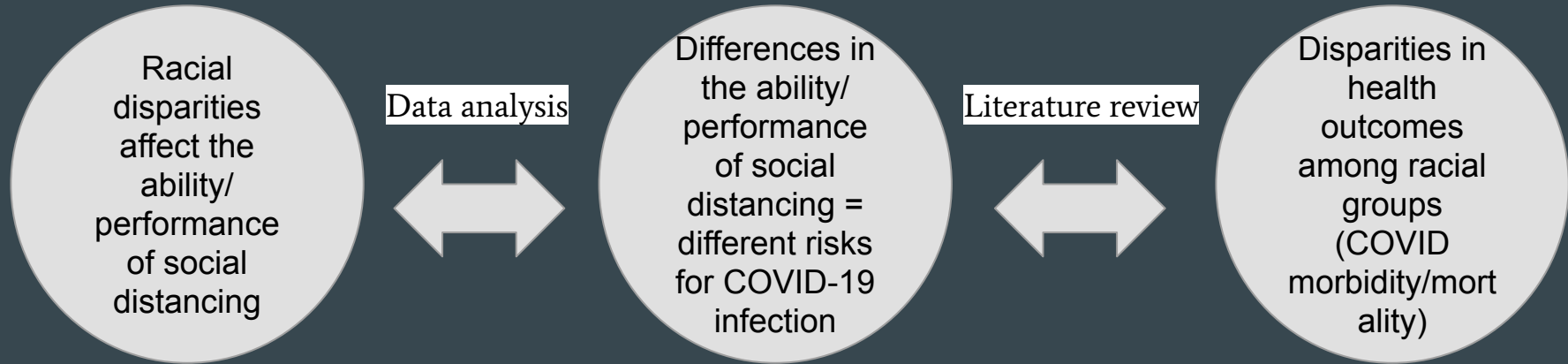
Disparities in Health Outcomes

Age-adjusted rates of lab confirmed COVID-19 non hospitalized cases, estimated non-fatal hospitalized cases, and patients known to have died 100,000 by race/ethnicity group as of April 16, 2020



[Source: NYC Health](#)

Understanding Why - the Logic



- The rate of doubling of cases has reduced sharply from 3.31 days to 100 days
- In the state of Minnesota, the number of predicted COVID-19 deaths over a period of twelve months has reduced from 57,000 to 29,000.

Lack of Social Distancing in Different Racial and Ethnic Groups

- The legal segregation in schools and housing, discrimination in the labor market and redlining, the practice of denying home loans to those living in predominantly African-American neighborhoods have contributed to a persistent racial wealth gap, with African-Americans continuing to struggle to move into neighborhoods with the sorts of socioeconomic opportunities that allow white families to better avoid exposure to COVID-19.
- Upto 75% of the frontline workers in New York are people of color
- According to the Bureau of Labor Statistics, only 19.7% of black workers and 16.2% of latinx workers are able to telework

Methodology

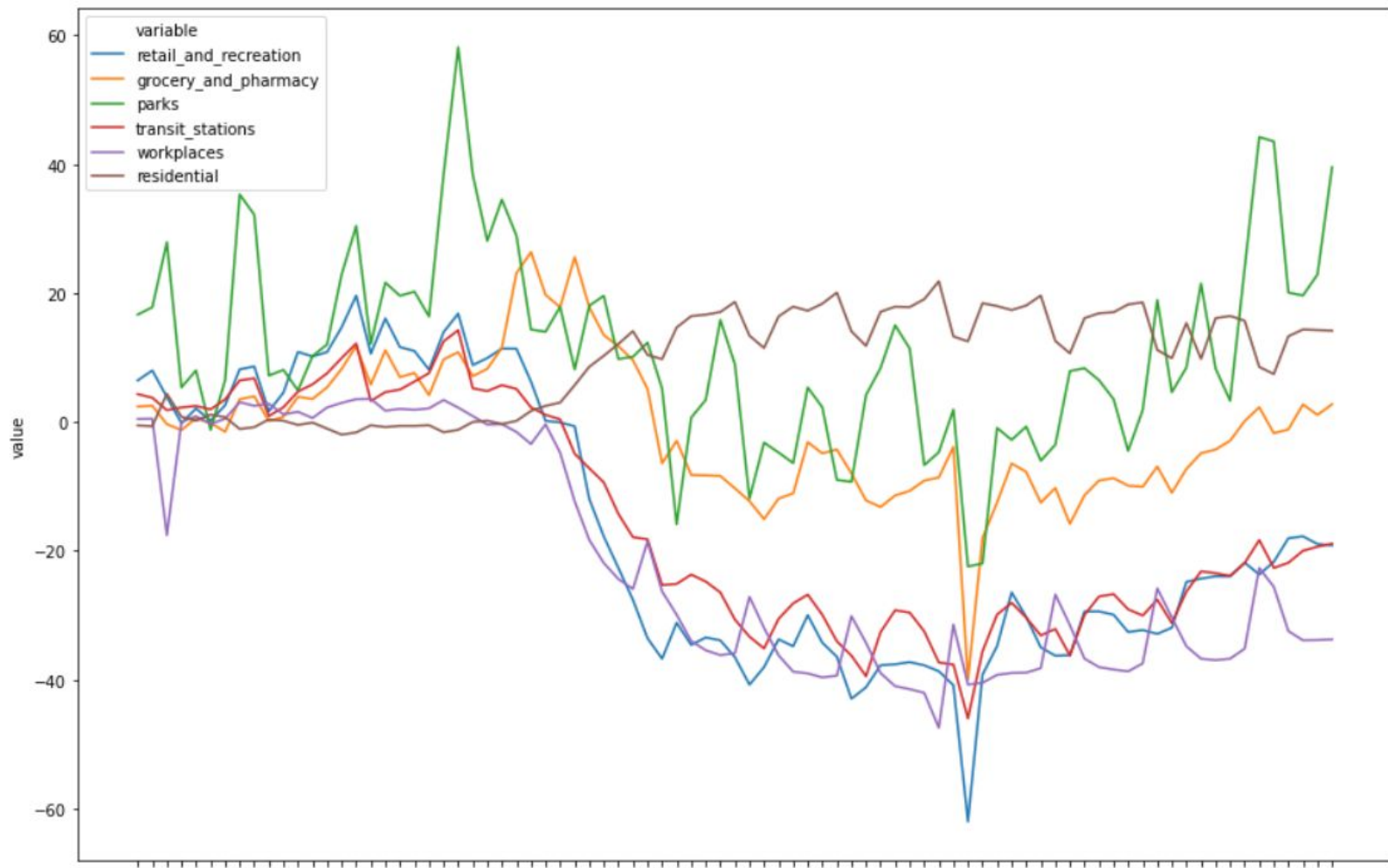
SDI

- A means of quantifying social distancing

Variance in SDI

- Use multivariate regression to understand the importance of different demographic factors with regard to one's ability to socially distance.

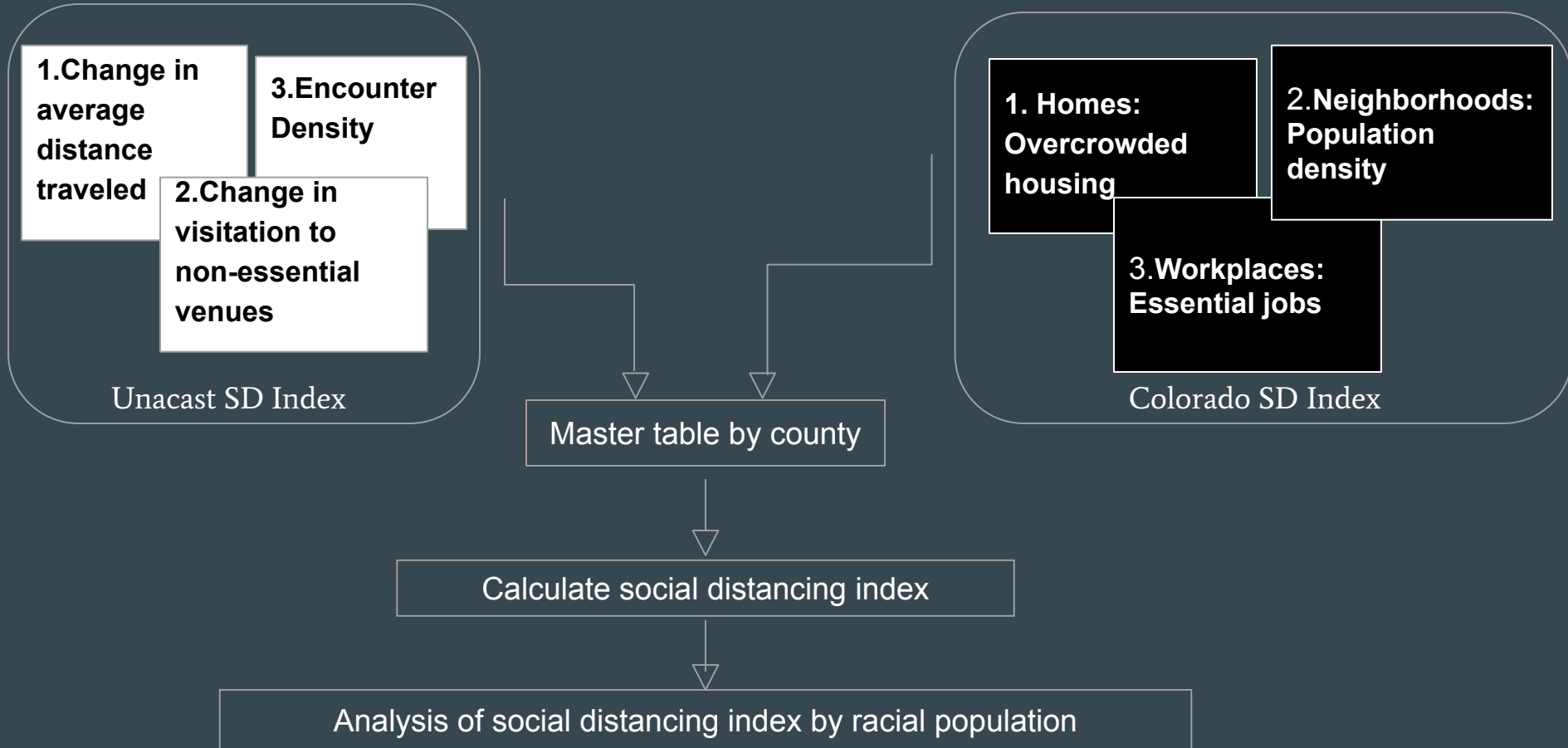
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Data Processing

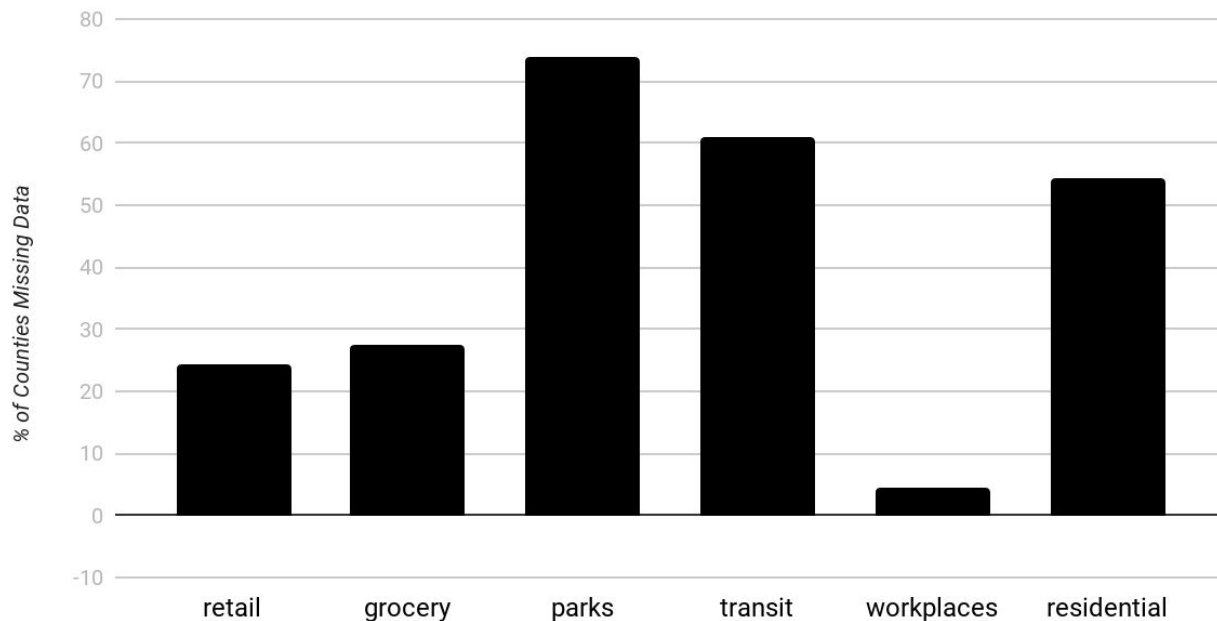


Current Roadblocks and Needs

Missing Data

Quantify
Distancin

Missing Data by Feature



missing

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Feedback from Mentors