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Are ADA requirements making NYC subways fully accessible for wheelchair users?

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XSEDE

Extreme Science and Engineering
Discovery Environment



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Overview

Why this topic?

- Public transit is an essential resource in NYC
- Over 20% of the NYC population has limited mobility

Where was the data obtained?

- NYC open data
- data.gov
- mta.info

Programs used:

- Python
- Jupyter Notebooks
- TACC SuperComputers
- XSEDE Resources

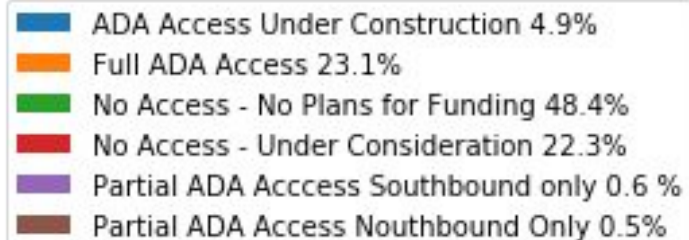
ADA - Americans with Disabilities Act

According to the MTA, fully accessible stations have:

- elevators or ramp
- handrails on ramps and stair
- large-print and tactile-Braille signs
- accessible station booth windows with sills located no more than 36 inches (91 cm) above the ground
- accessible service entry gates
- platform gap modifications or bridge plates to reduce or eliminate the gap between trains and platforms where it is greater than 2 inches (5.1 cm) vertically or 4 inches (10 cm) horizontally

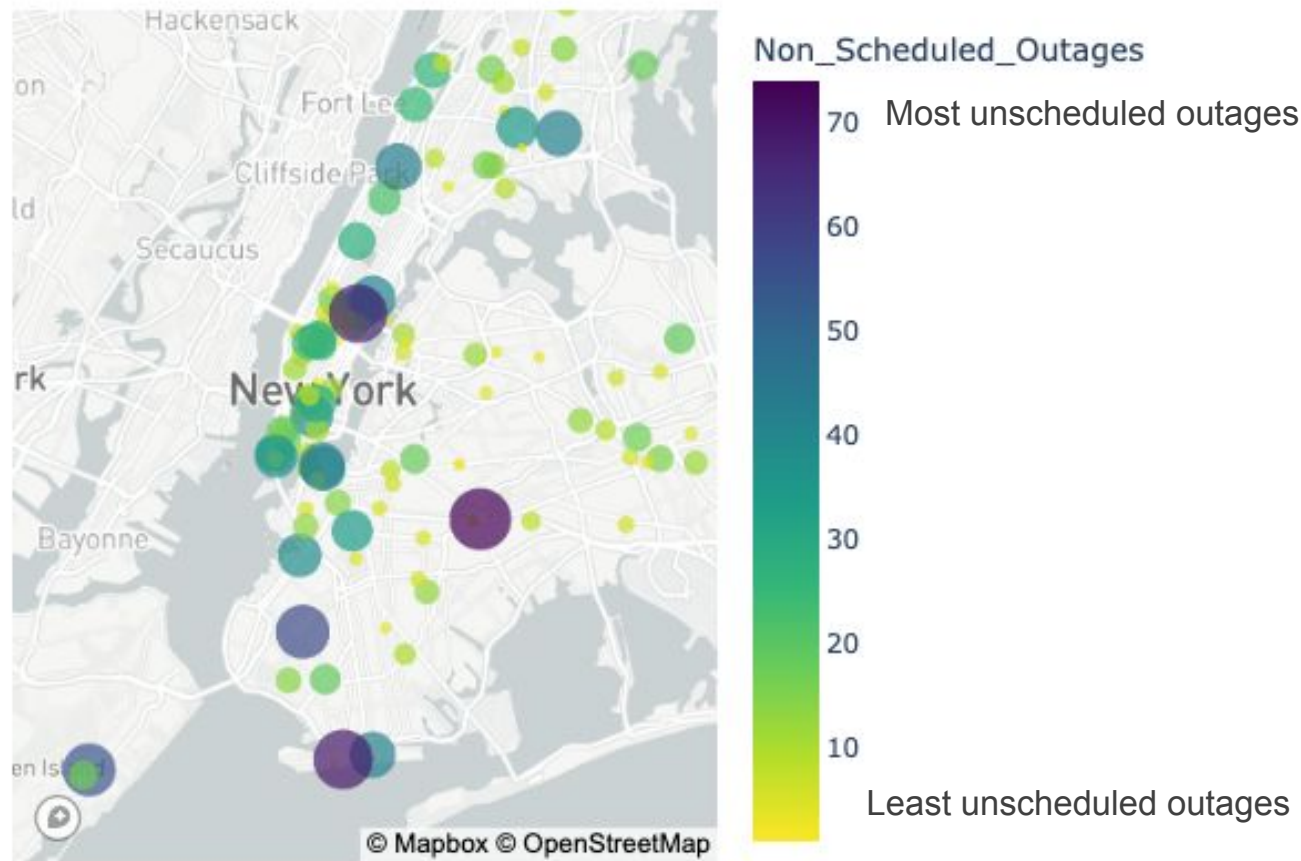
ADA Access

NYC subway station ADA access status

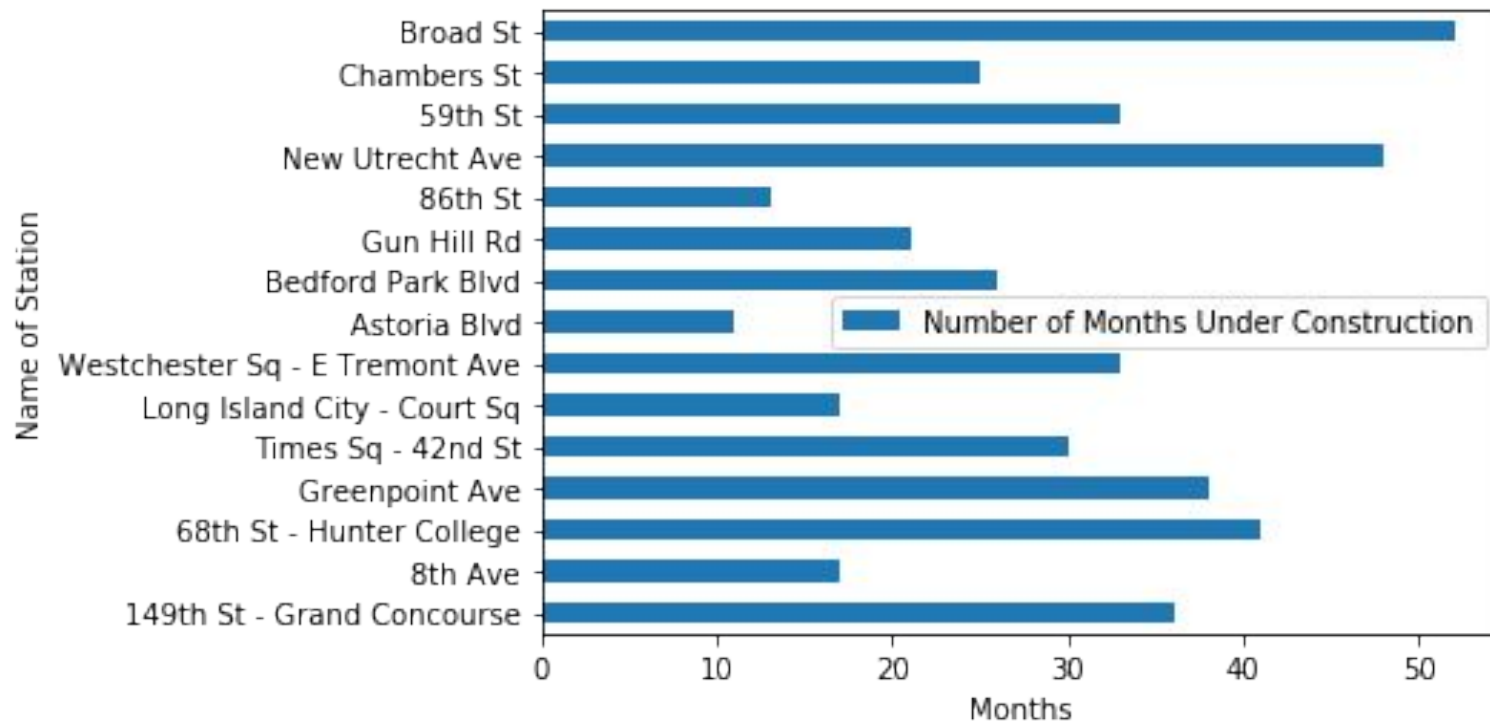


Full Access Breakdown

Of those stations that do have full ADA Access how often do elevators, escalators ect. *unexpectedly* breakdown.



ADA Access Under Construction



Conclusion

- While 20% of the NYC population has low mobility they are only granted full access to 23% percent of subway stations.
- Of these stations many experience unexpected outages that further limit the resources available to those with low mobility.

Limitations

- Data didn't not specify what equipment is within used in the station
- Data did not specify construction goals

Future Research

- Compare different means of transit
- Compare to rural areas
- Analysing quality of life in relation to transit availability



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References

https://github.com/NewYorkCityCouncil/subway_accessibility

<https://github.com/tsdataclinic/mta>

<https://www.cdc.gov/nchs/nhis/2020nhis.html>

https://en.wikipedia.org/wiki/Accessibility_of_the_Metropolitan_Transportation_Authority



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