

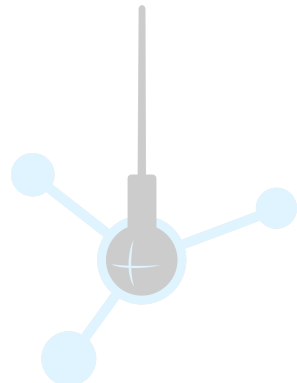
Datathon 2021

ADFC German Bicycle Club

Team CCC-20 (Covid Cycling Conclusions)

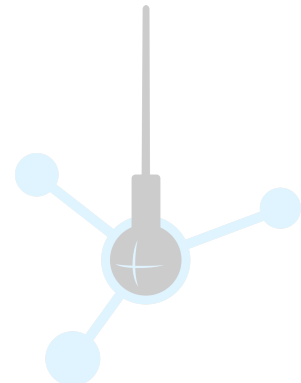
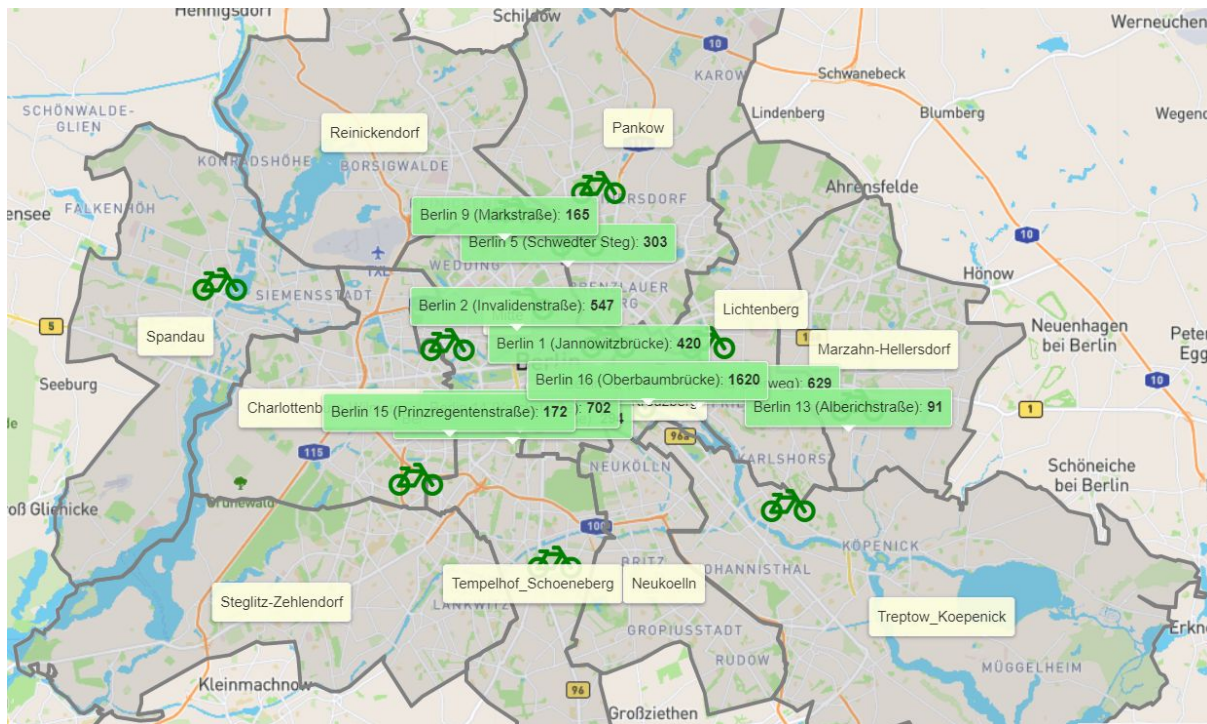
Problem Description

Continue to **demonstrate the critical value of biking infrastructure**, especially in social crises. **Advocate for increased support** for accessibility of bike infrastructure because of how meaningful this is during disaster situations.



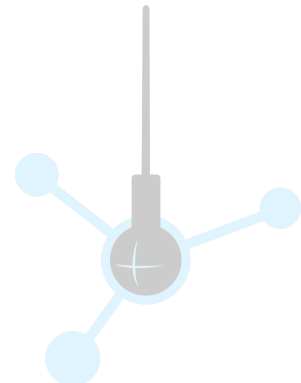
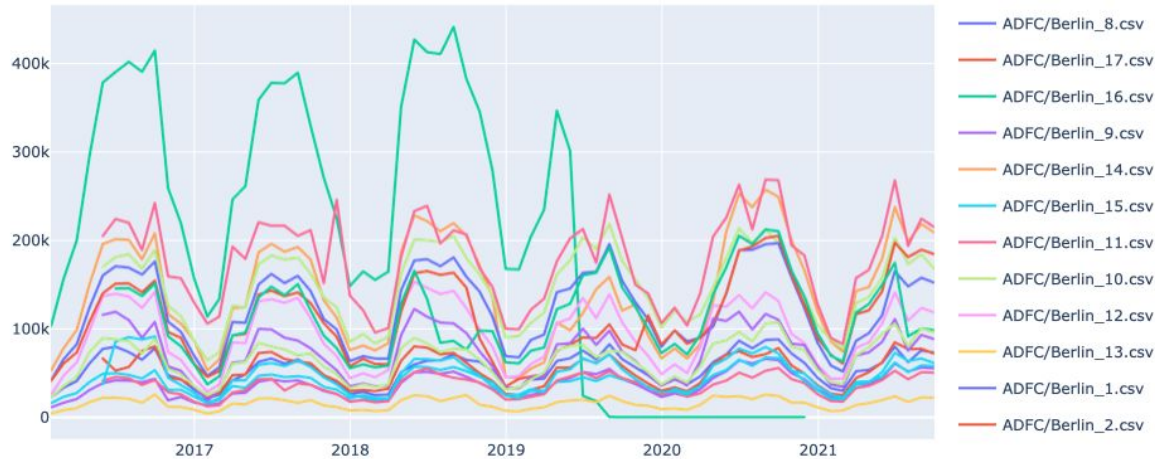
Visualisation

https://datathon-bikes.herokuapp.com/bike_stations



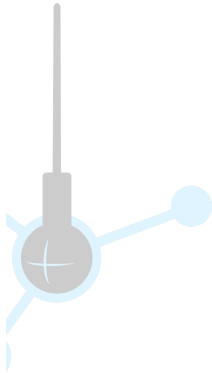
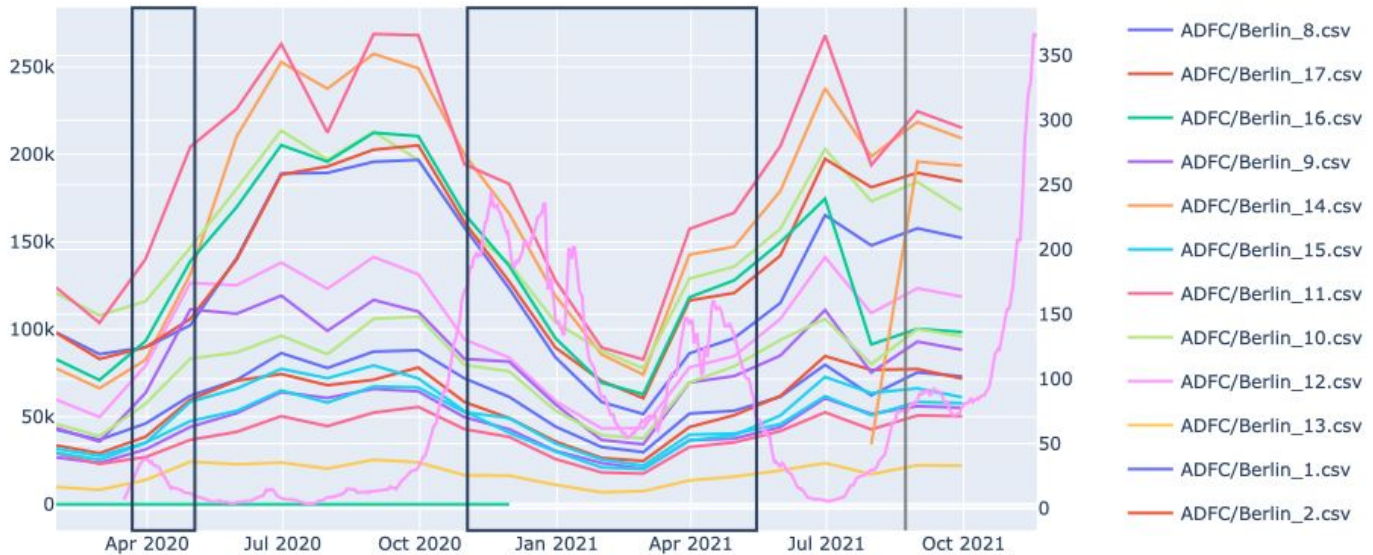
Findings

There was not enough data to demonstrate a strong correlation between a Berlin lockdown and cycling



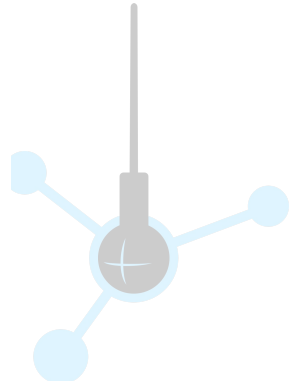
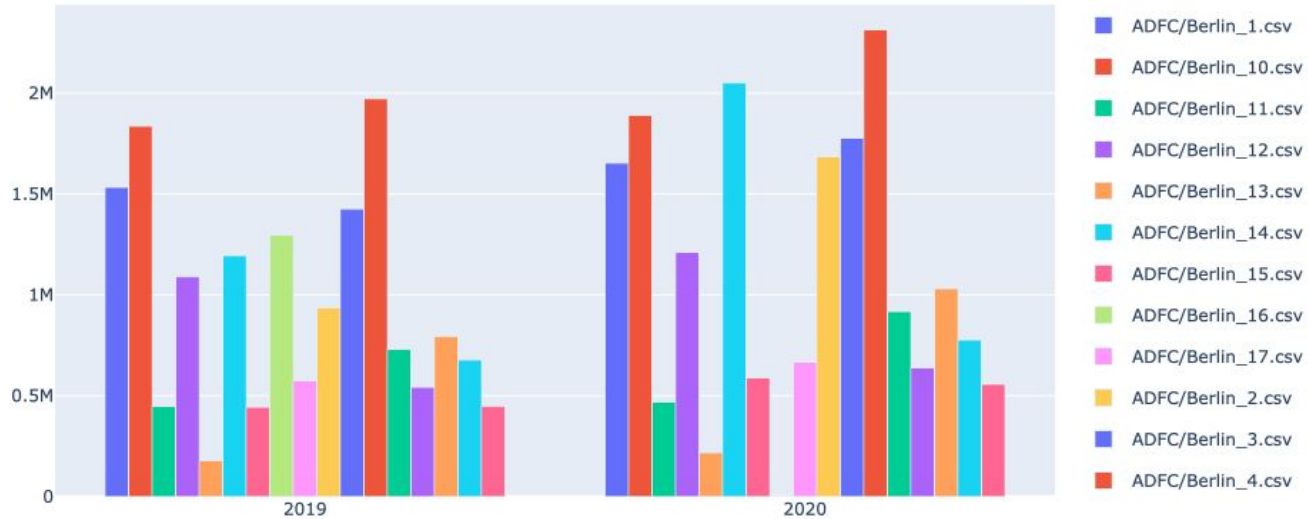
Findings

Highlighting lockdown and 3G restrictions



Findings

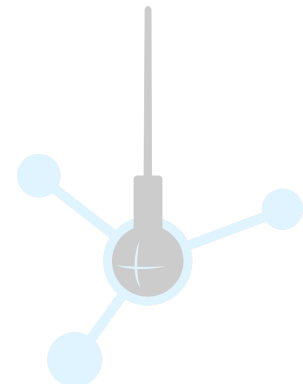
Comparison 2019 - 2020



Findings

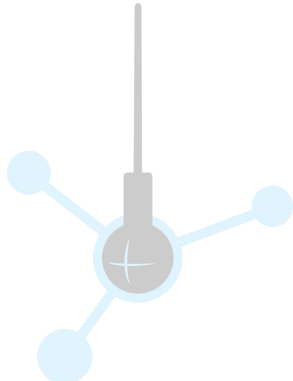
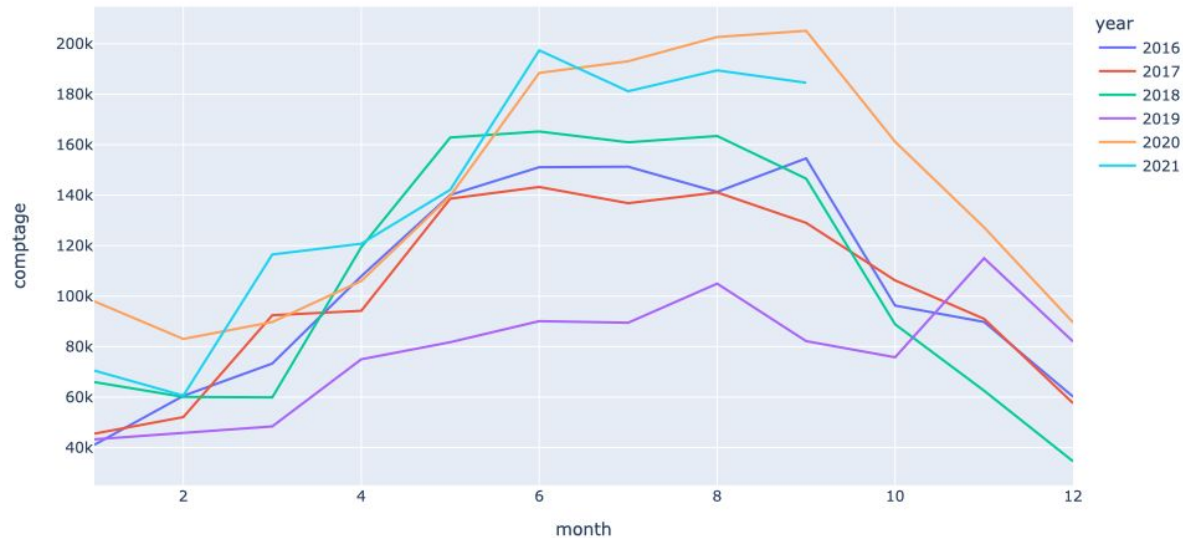
Comparison 2019 - 2020

Station	2019	2020	Change in %	Street
Berlin_1	1532799	1653053	7,85%	Jannowitzbrücke
Berlin_2	933823	1683723	80,30%	Invalidenstr
Berlin_3	1425729	1776814	24,62%	Frankfurter Allee
Berlin_4	1971632	2315581	17,44%	Berliner Straße
Berlin_5	730920	916954	25,45%	Schwedter Weg
Berlin_6	542066	639822	18,03%	Klosterstraße
Berlin_7	791889	1030412	30,12%	Breitenbachplatz
Berlin_8	676975	776103	14,64%	Monumentenstraße
Berlin_9	445702	556630	24,89%	Markstraße
Berlin_10	1836270	1891728	3,02%	Maybachufer
Berlin_11	446900	467890	4,70%	Kaisersteg
Berlin_12	1088797	1211738	11,29%	Paul- und Paula-Uferweg
Berlin_13	177594	217001	22,19%	Alberichstraße
Berlin_14	1193433	2049992	71,77%	Yorckstraße
Berlin_15	443086	589432	33,03%	Prinzregentenstraße
Berlin_16	1296751	0	-	Oberbaumbrücke
Berlin_17	574090	667394	16,25%	Mariendorfer Damm
Berlin_18	-	-	-	Straße des 17. Juni

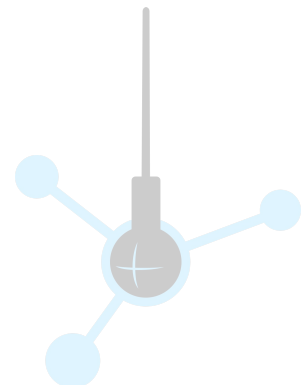
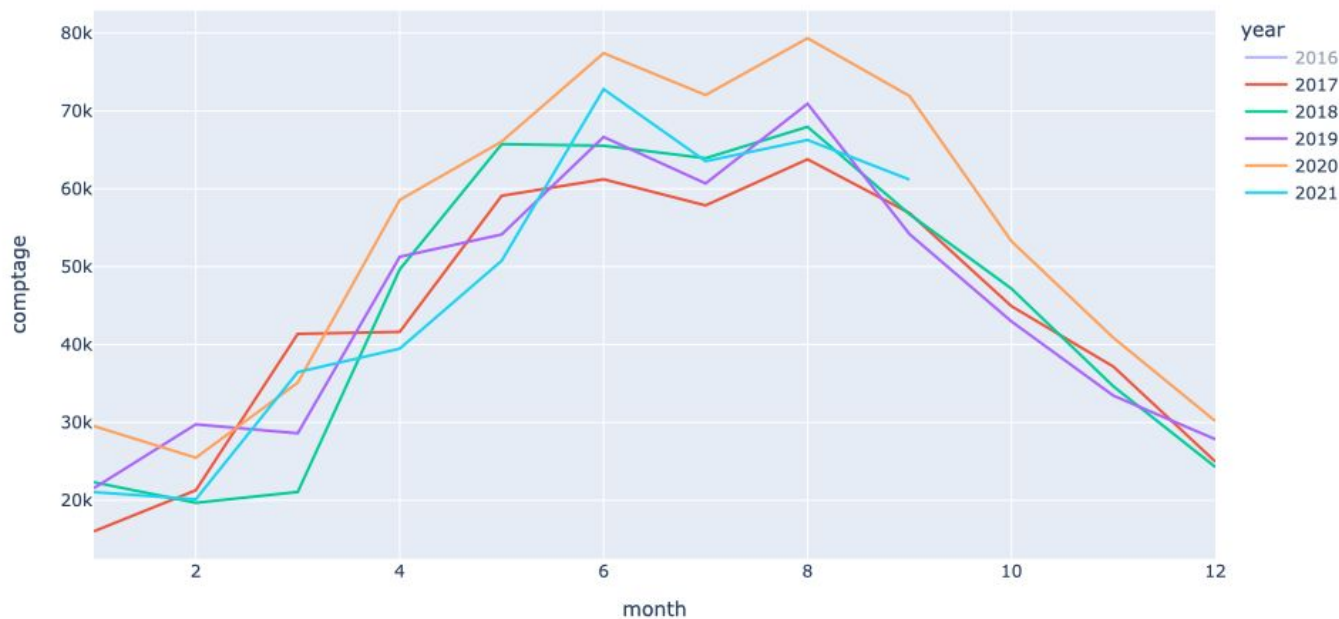


Findings: Hauptbahnhof

Isolated graph of traffic changes in Hauptbahnhof traffic in & around COVID lockdown years



Findings: Klosterstraße (Spandau)



Next Steps: Proportion of Commuters

- A potential next step is to **calculate the proportion of cyclists in relation to public transit riders during and before lockdown periods**
- We hypothesize that there will be a decrease in ridership of public transit during the pandemic, therefore increasing the cycling proportion

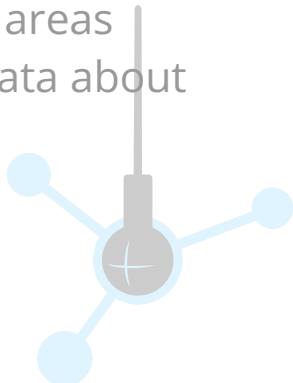


Solution: Demonstrate the Value of Biking Infrastructure

Should the proportion of bikers during the lockdown in Berlin increase meaningfully, it is a strong demonstration of the critical nature of this infrastructure in public disaster situations.

Potential applications and action:

- Prioritize clearing & salting bike lanes in winter months
- Increase bike tooling stations around Hauptbahnhof and other high traffic areas
- Increase bike counting stations in more areas to gather more complete data about cycling in Berlin

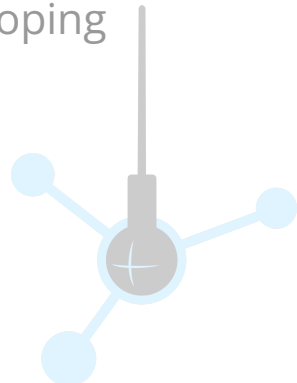


Next Steps: Proposed Cycle Counters

Our group noticed that current cycle counters were not representing strong cycling communities outside the Ring.

Next steps:

- Analyze population density data, which may suggest locations to fill in the gaps currently missing in the biking data
- Consider proximity to natural features as a draw for more cyclists - developing strong infrastructure around these areas is also critical

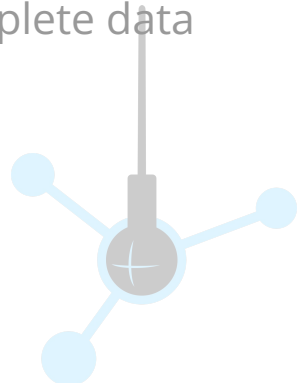


Key Benefits

The most important advantages of the solution...

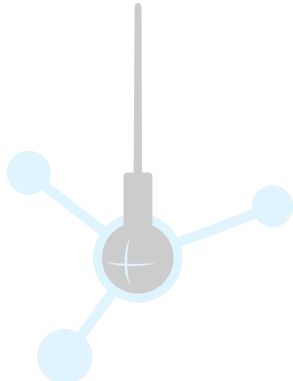
Our analysis suggests:

- A case for advocacy of an increase in bike infrastructure investment
- Strong case for prioritization of maintenance of bike lanes during months with challenging weather
- Strong case for investment in beginner-friendly tools, such as tooling stations around high traffic areas
- Strong case for an increase in bike counting stations to gather more complete data of this important public good/service



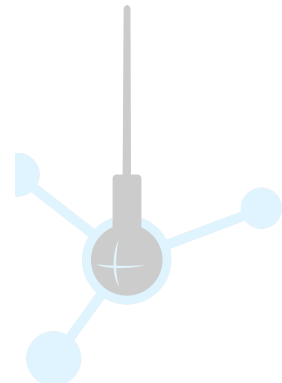
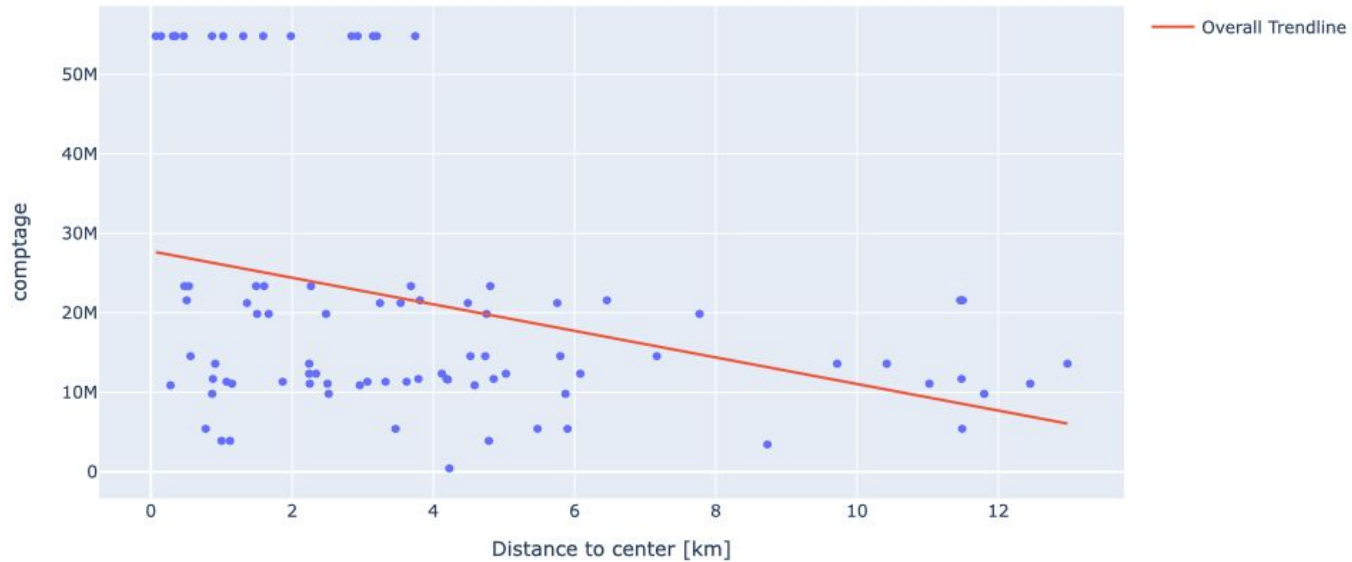
Resources Needed

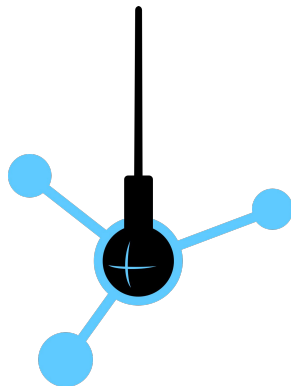
- Data:
 - Covid data for the city of Berlin are [open data](#) provided by LaGeSo (Landesamt für Gesundheit und Soziales).
- Technology:
 - *Python*
 - *Jupyter Notebooks*
 - *Heroku, Flask (website)*
- Expertise:
 - *Python data analysis skills*
 - *Project management/ Public management knowledge*
 - *Analytics & statistics awareness*



City center

Comptage against Distance to center





Thank you!

Jake Pita

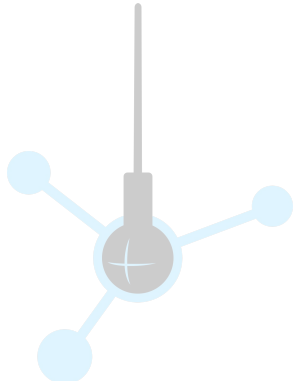
Vy Nguyen

Christine Cepelak

Giuditta Parolini

Findings

- *There was a meaningful change in the bike traffic at the Hauptbahnhof central station during lockdown in Berlin*
- *(more than 100% of ridership in critical months such as September, which usually demonstrates low ridership)*
- *Increase of comptage for almost every station from 2019 to 2020*



Limitations, Risks & Lessons Learned

- Data:
 - *Counting station data was somewhat incomplete - not fully representative of all of Berlin*
- Technology: *availability in organization, associated costs, reliability?*
- Expertise: *lack of expertise, education?*

