

We want to understand how difficult a path is for someone cycling.

The following data is there for 100 paths:

information	key	detail
Unique ID	"id"	integer
Portion of the path that is a segregated cycle lane	"segregated_portion_m"	Portion of total, value between 0 and 1
Total elevation gained from start to finish in metres	"elevation_gain_total_m"	Negative if elevation is lost, positive if gained, unconstrained
Maximum steepness observed in the path as a percent	"max_steepness_gradient"	Represented as the percentage of "rise over run", ie. 100% means equal rise to run, which would mean a 45 degree angle.
Length of the path in metres	"length_m"	
Number of stoplights that are crossed from start to finish	"stoplights_total"	
Portion of the path that is lit at night	"lit_portion"	Portion of total, value between 0 and 1
Average number of cyclists on path, by hour of day	"cyclists_average"	Represented as an array, where the index implies the hour in 24 hour format. Ie. At index 0, represents the average number of riders between 0 and 1 hours, At index 14, represents the average number of riders between 2pm and 3pm.

* Note that this data is randomly generated with a little bit of logic, but nothing too stringent.

How it works:

- Spend 30 minutes to an hour, in Python, loading the data and beginning to explore it,
- We are interested in understanding your thought process, and how you set up code to work with this kind of data,
- We are also interested in what tools and techniques you use to make sense of the data,
- We expect to get a copy of your code via GitHub or other platform/approach; note that the data we have provided is not private or confidential and can be shared freely or as you see fit,
- Following on from your own investigation, we will be keen to discuss where you got up to, what you found, and importantly how you would extend and continue to work on this problem.
- Importantly, we do not expect a complete solution, your work should only form the basis on which to have a conversation with us about how to tackle the problem.