Speed Summary*

Mobile Watch Your Speed Program

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Abstract

This data is obtained by the city of toronto who installed some WYSP (Watch Your Speed Program) device on the street to test the speed of the cars. The data shows the average speed, percentile speed at different locations. We will talk about this dataset in this paper. Find my code here at github: https://github.com/liupuyu2/sta304

1 Introduction

This data is obtained by City of Toronto who placed some devices called WYSP device. Everyone can request a WYSP device for their street from the residential area.This device consists of two parts: A radar device and LED. The radar is used to test the speed of the vehicle. The LED is used to display the speed of the cars, motorcycles. We can see them very often in GTA.

2 Data

The data is from Open Data Toronto. The data can be obtained by downloading directly from the website. There exists bias that could be resulted from the error of the WYSP device. (as radar device could be affected by other electrical devices) The standard error of the speed testing device is +- 4 kmph. But if used incorrectly, the speed could be severly biased. And also, I noticed that this data has some outliers, but we cannot determine whether they are valid.

_id	location_id	ward_no	location	from_street	to_street	direction	installation_dat
92015	1736	15	Mildenhall Road	Lawrence Ave East	Blythwood Road	NB	2018-08-15
92016	2203	19	Golfview Ave	Burgess Ave	Duvernet Ave	NB	2018-08-16
92017	2648	23	Chartland Blvd S	Hartleywood Dr	Briarscross Blvd	WB	2018-08-16
92018	281	3	Wesley St	The Queensway	Mendota Rd	SB	2018-09-17
92019	429	3	Cloverhill Rd	Kinsdale Blvd	Chadburn Rd	SB	2018-10-05
92020	1275	11	550 Bayview Ave	S/O Ramp		SB	2018-09-28

*Code and data are available at: https://open.toronto.ca/dataset/mobile-watch-your-speed-program-speed-summary/.

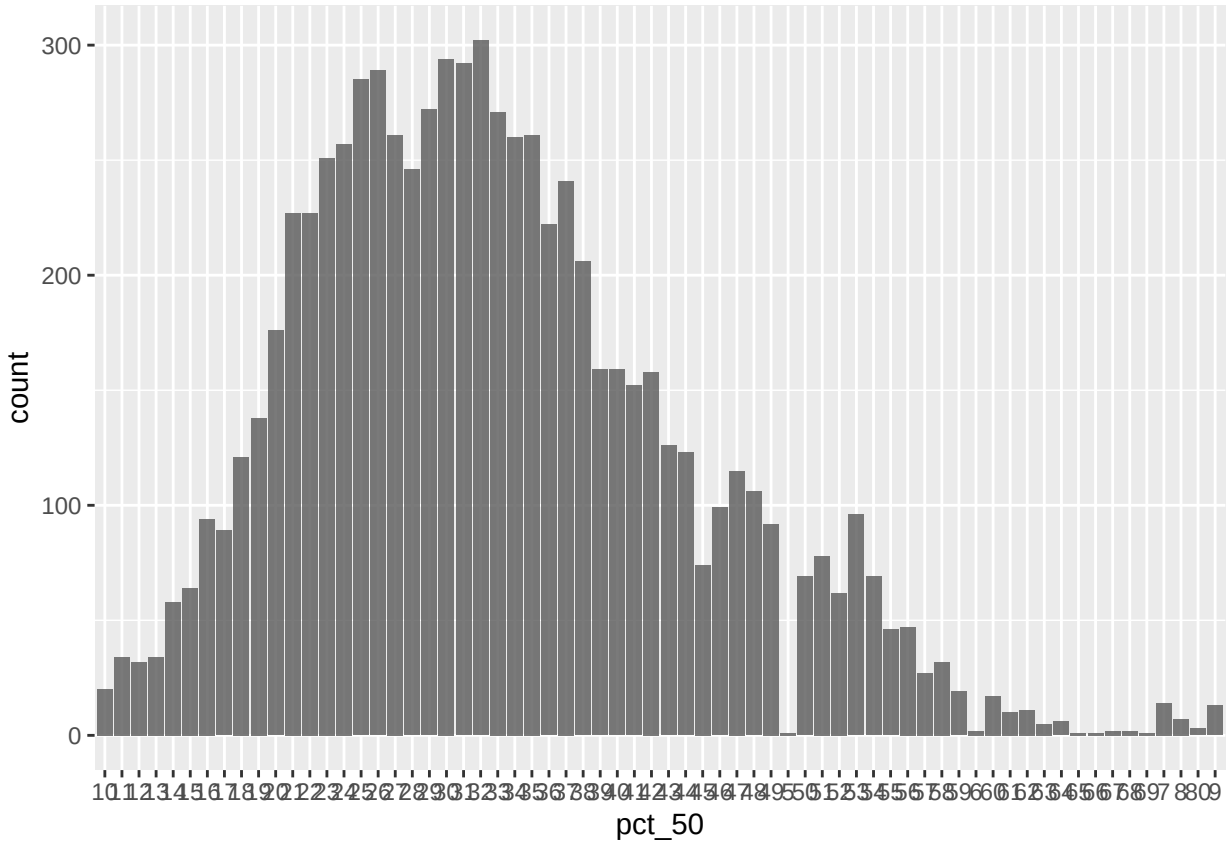

Figure 1: 50th percentile speed

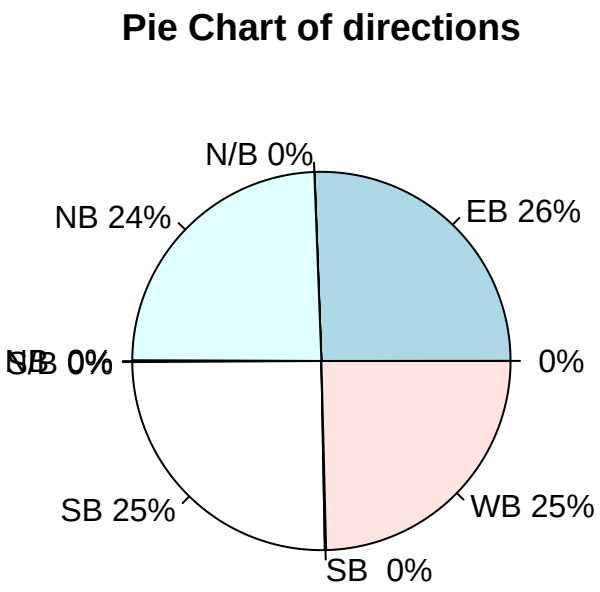

Figure 2: 50th percentile speed

(1) Wickham et al. (2019)
(2) R Core Team (n.d.)
(3) Xie (2021)
(4) Toronto (2022)
(5) "Mobile Watch Your Speed Program – Speed Summary" (n.d.)

Reference

"Mobile Watch Your Speed Program – Speed Summary." n.d. https://open.toronto.ca/dataset/mobile-watch-your-speed-program-speed-summary/.

R Core Team. n.d. *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing. https://www.R-project.org.

Toronto, City of. 2022. *Open Data Toronto*. https://www.toronto.ca/city-government/data-research-maps/open-data/.

Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. https://doi.org/10.21105/joss.01686.

Xie, Yihui. 2021. *Knitr: A General-Purpose Package for Dynamic Report Generation in r*. https://yihui.org/knitr/.