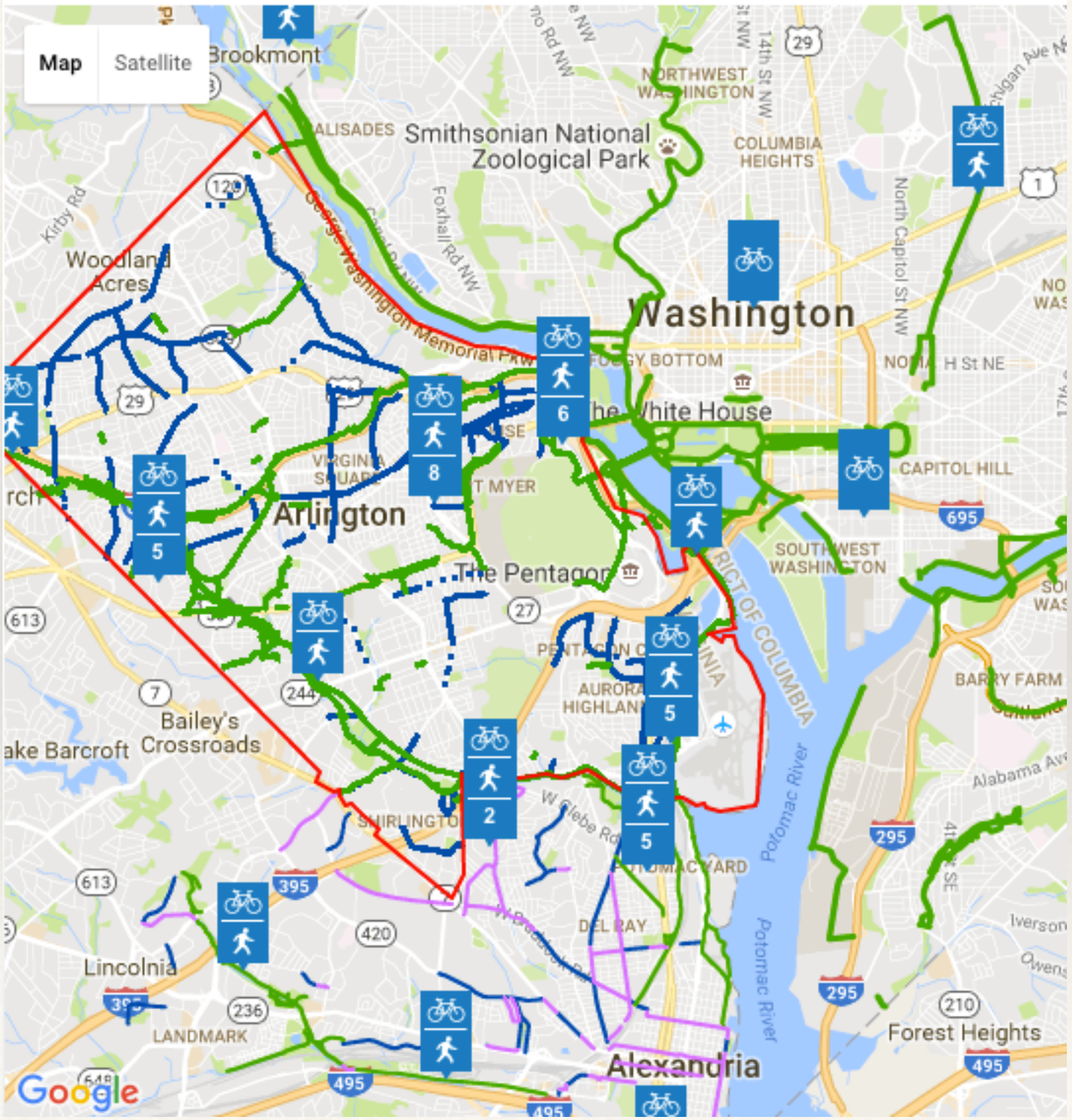
Transportation Techies

Bike Counters across the DC Region

Kate Rabinowitz
@datalensdc

Find this presentation and code behind it here: https://github.com/katerabinowitz/DC-Biking

BikeArlington maintains counter data

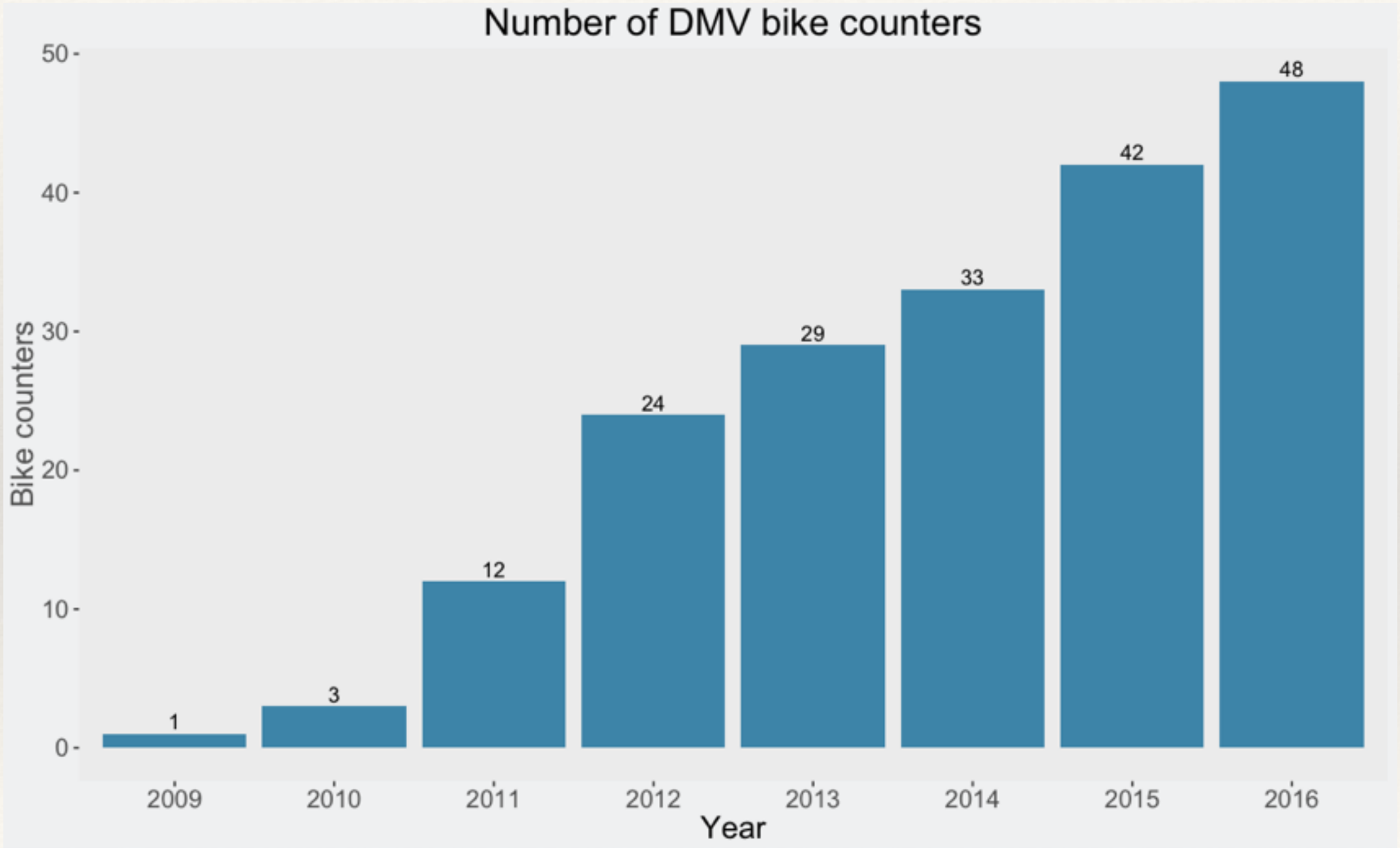


Data for bike counters in Arlington, Alexandria, DC, and Montgomery County available through: http://www.bikearlington.com/pages/biking-in-arlington/counting-bikes-to-plan-for-bikes/

The API has lots and lots of data: bike counts down to 15 minute intervals, counter metadata, weather, metro and bus data, holiday data

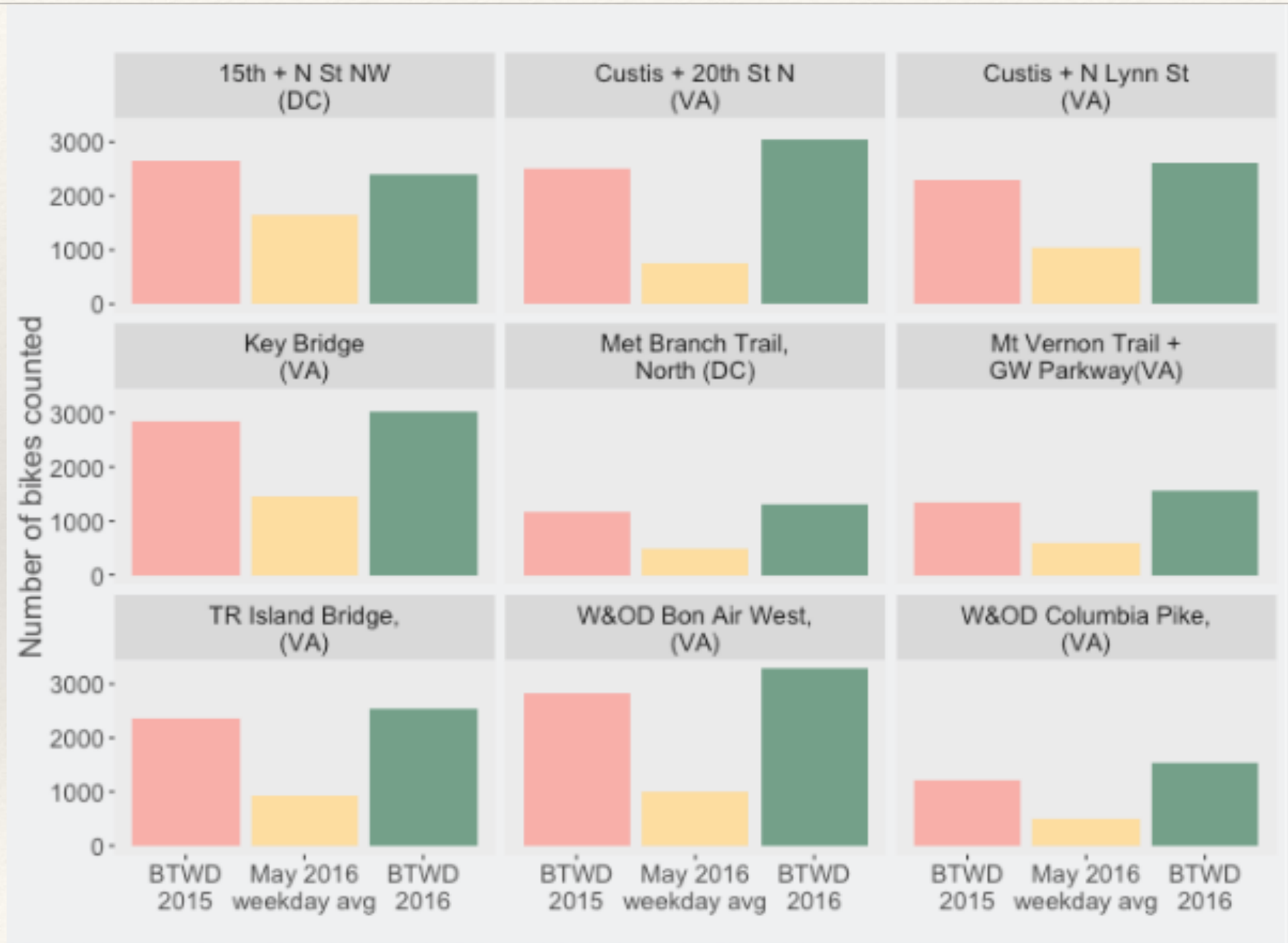
Outputs to XML. Scraper on my github. Look for data soon on new Code for DC data repository

Data available from 48 counters, with variable history



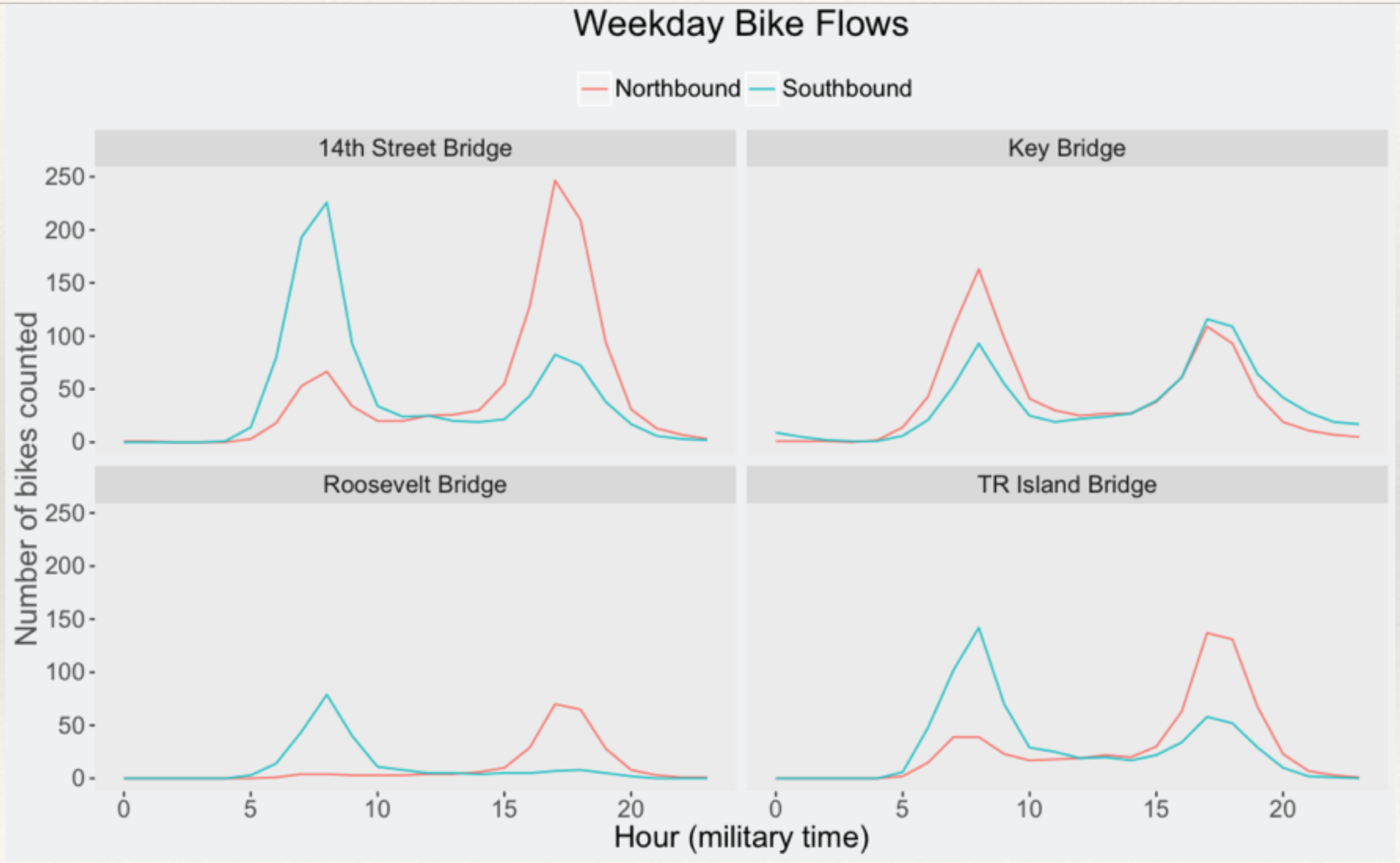
Source: DataLensDC, BikeArlington

How successful are bike events?



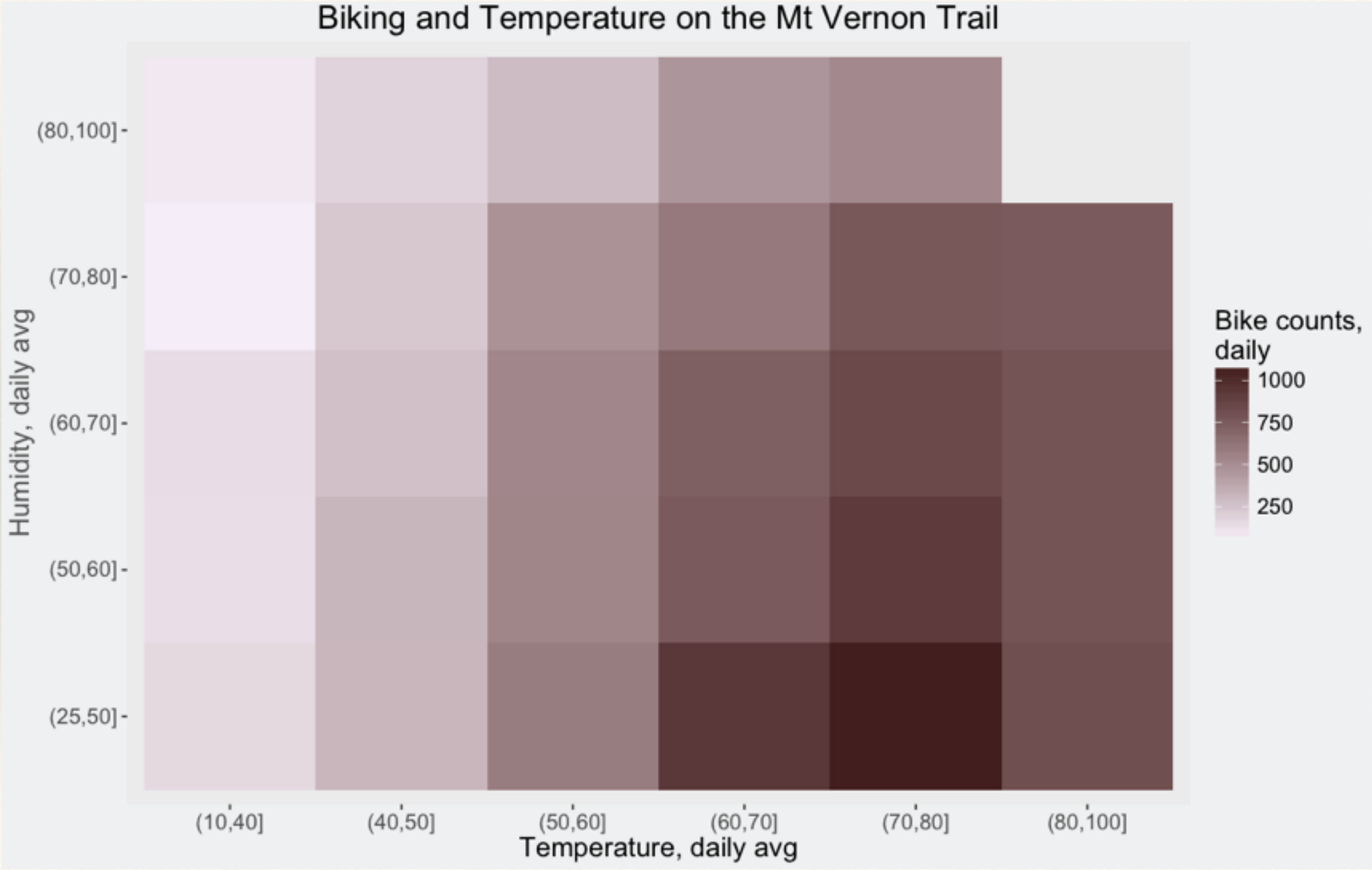
Source: DataLensDC, BikeArlington

What do bike commuting patterns look like?



Source: DataLensDC, BikeArlington

How does biking change with heat / humidity?

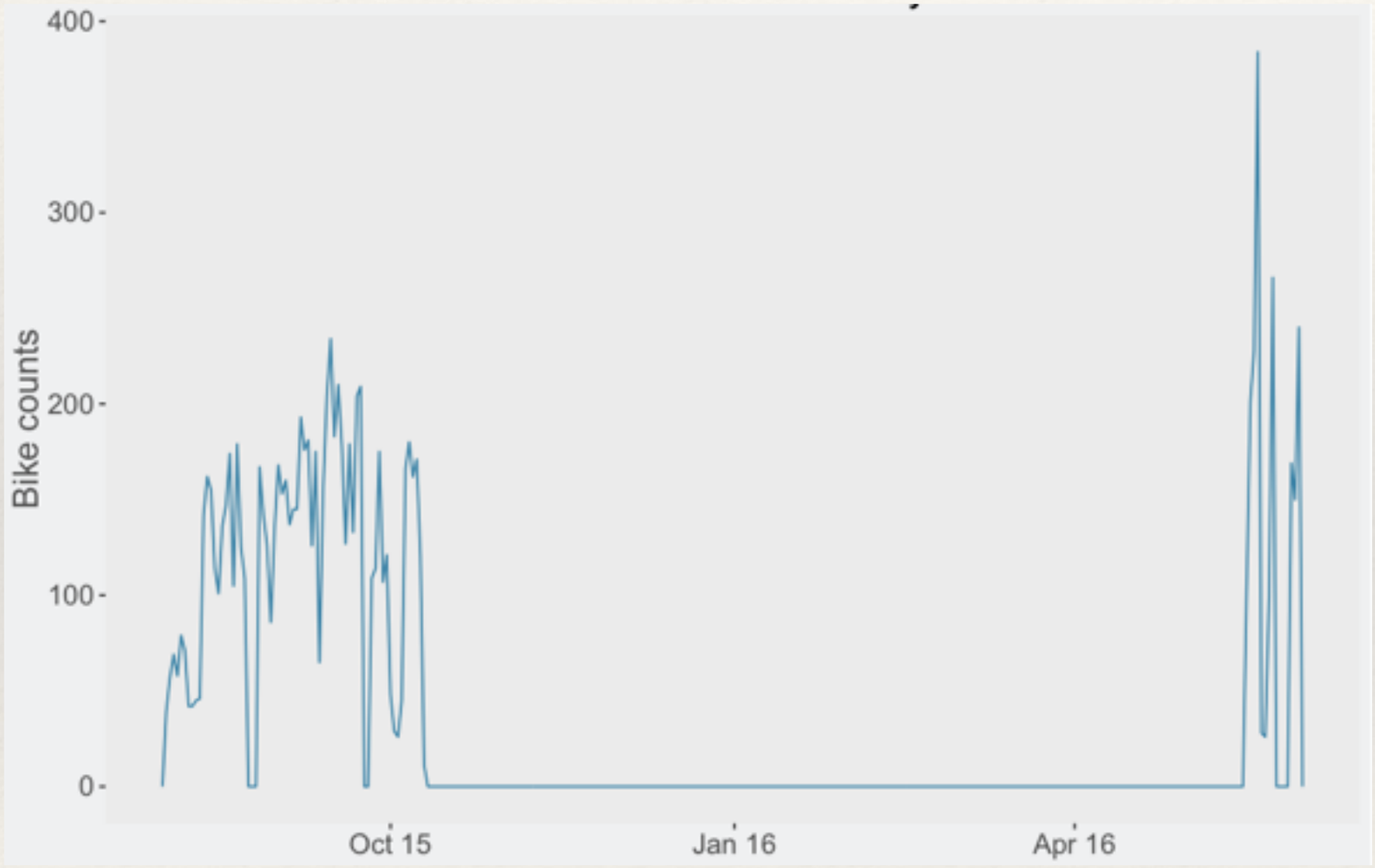


Mt Vernon Trail after it passes GW Pkwy

Source: DataLensDC, BikeArlington

Data Quality:
Life ain't easy for a bike counter

An unfortunate incident on Crystal Drive



An unsolved mystery on Teddy Roosevelt Island

Source: DataLensDC, BikeArlington

Imperfectly comparing two imperfect methods - machine to human counts

	2013		2014		2015	
Key Bridge	1,385	1,492	909*	1,431	NA	NA
Roosevelt Bridge	NA	NA	0	368	NA	NA
14th Street Bridge	NA	NA	0	1,323	1,866	2,067
15th St NW	NA	NA	NA	NA	1,356	1,232

Source: DataLensDC, BikeArlington, DDOT

Human counters are sent out by DDOT. to various DC locations annually. The comparison is over across two four hour (peak commuting) periods for a given day. The locations are not an exact match, but within a couple blocks of each other. NA either manual or bike count data was not collected that year. More detailed information can be found on my github.

*Key Bridge is comprised of two counters - Key Bridge West and Key Bridge East. Key Bridge West returned no data for the day so the Key Bridge total is absolutely an underestimation due to a bike counter failure.

A few things you should always do

Take advantage of the historical data to increase sample size

Check and control for missing data, zero counts, and high end outliers

Consider weather, events, and alternative transportation quality

And some things I'd like you to do!

Quality check - identify no and high count errors, outliers

Has/will SafeTrack have longer term effects on bike commuting?

How Does weekend track work/changing bus routes change biking?

Impact of weather on biking - commuters v. recreational