Understanding the influence of transportation infrastrucure on Urban Heat in Phoenix, Arizona

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Data Sources

Weather Data

- National Centers for Environmental Information (NCEI): https://gis.ncdc.noaa.gov/maps/ncei/cdo/hourly
- The Arizona Meteorological Network (AZMET): https://cals.arizona.edu/azmet/az-data.htm
- Maricopa County Flood Control District (MCFCD): https://www.maricopa.gov/3769/Weather-Sensor-Data
- iButton data recorded in the Summer of 2017 by the Urban Water Innovation Network (UWIN): https://erams.com/UWIN/

Parking Data

- Forthcoming publication by Hoehne et al, info here: http://transportationlca.org/phoenixparking/

Road Network Data

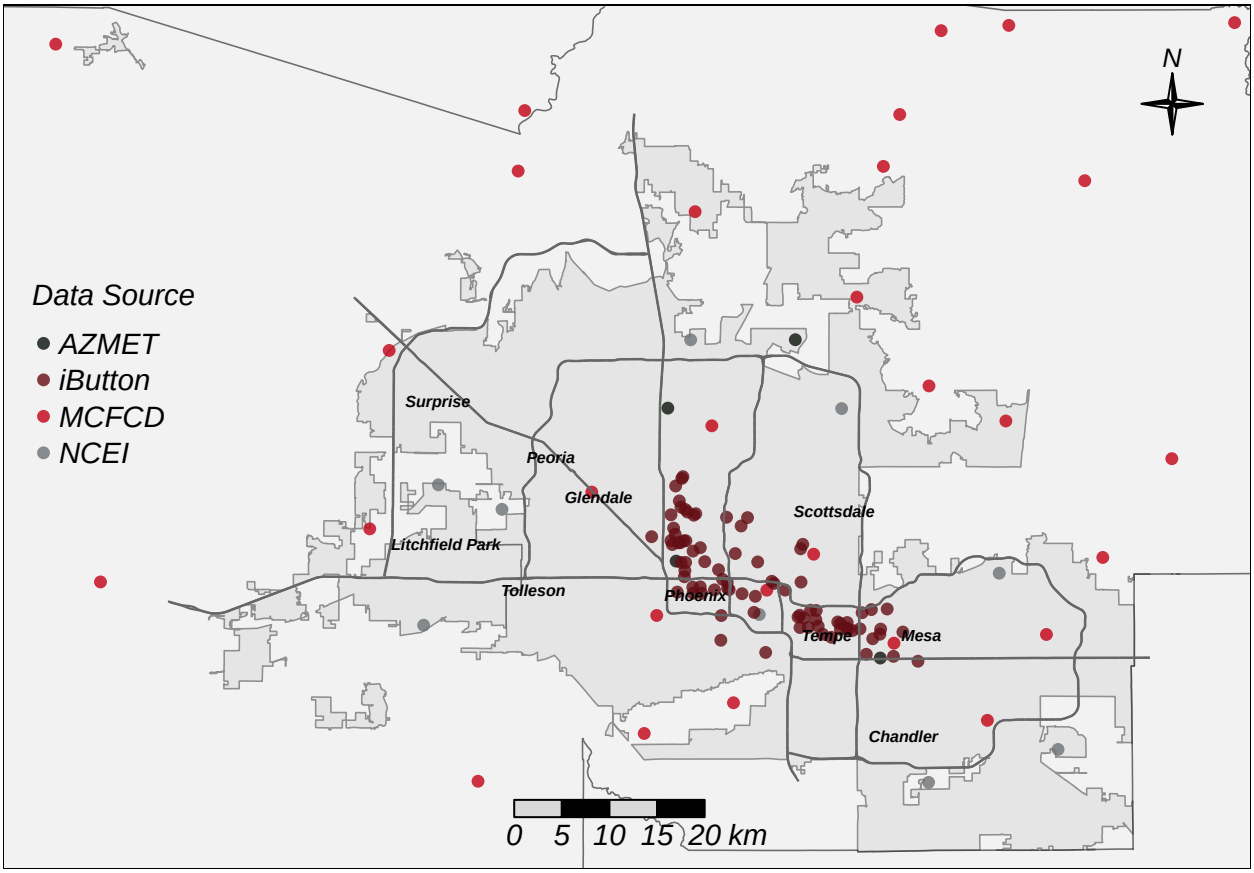
- OpenStreetMap (© OpenStreetMap contributors)
- Arizona Department of Transportation (ADOT)

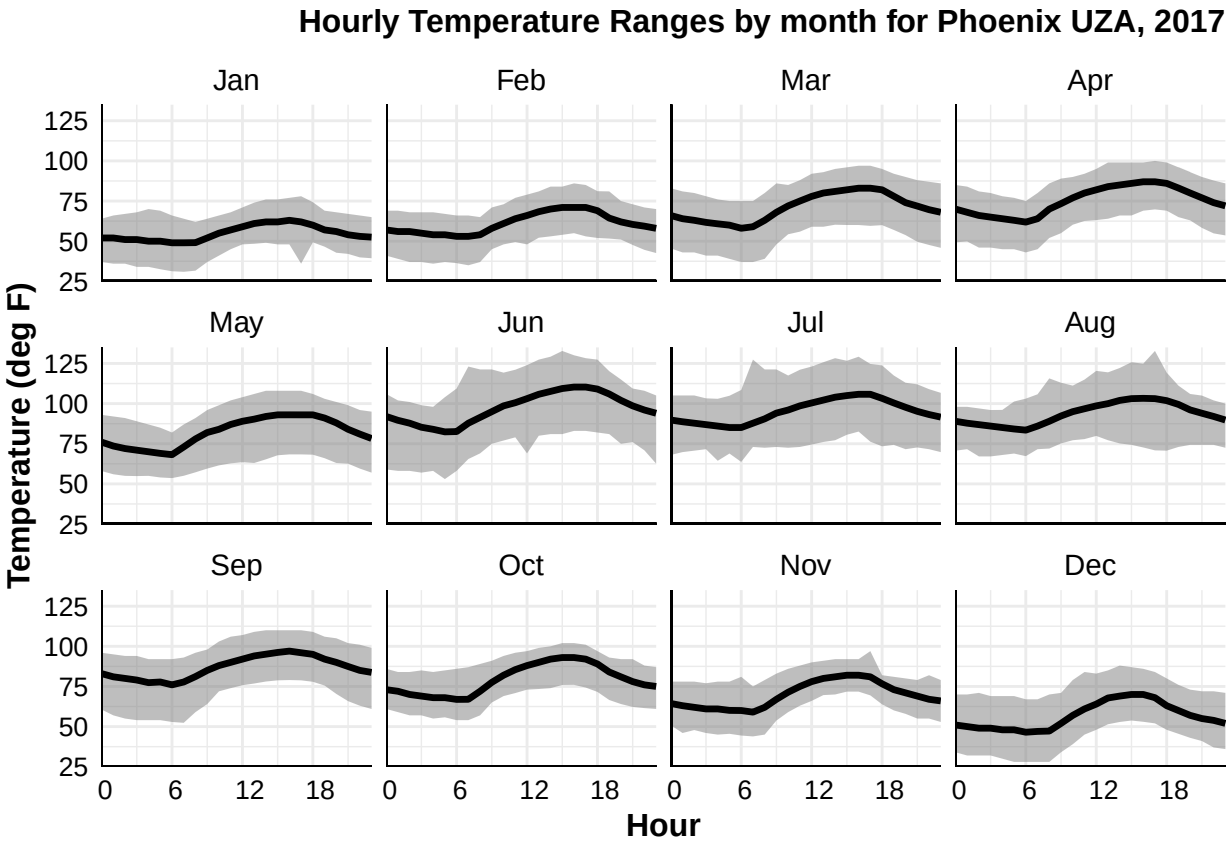
Traffic Data

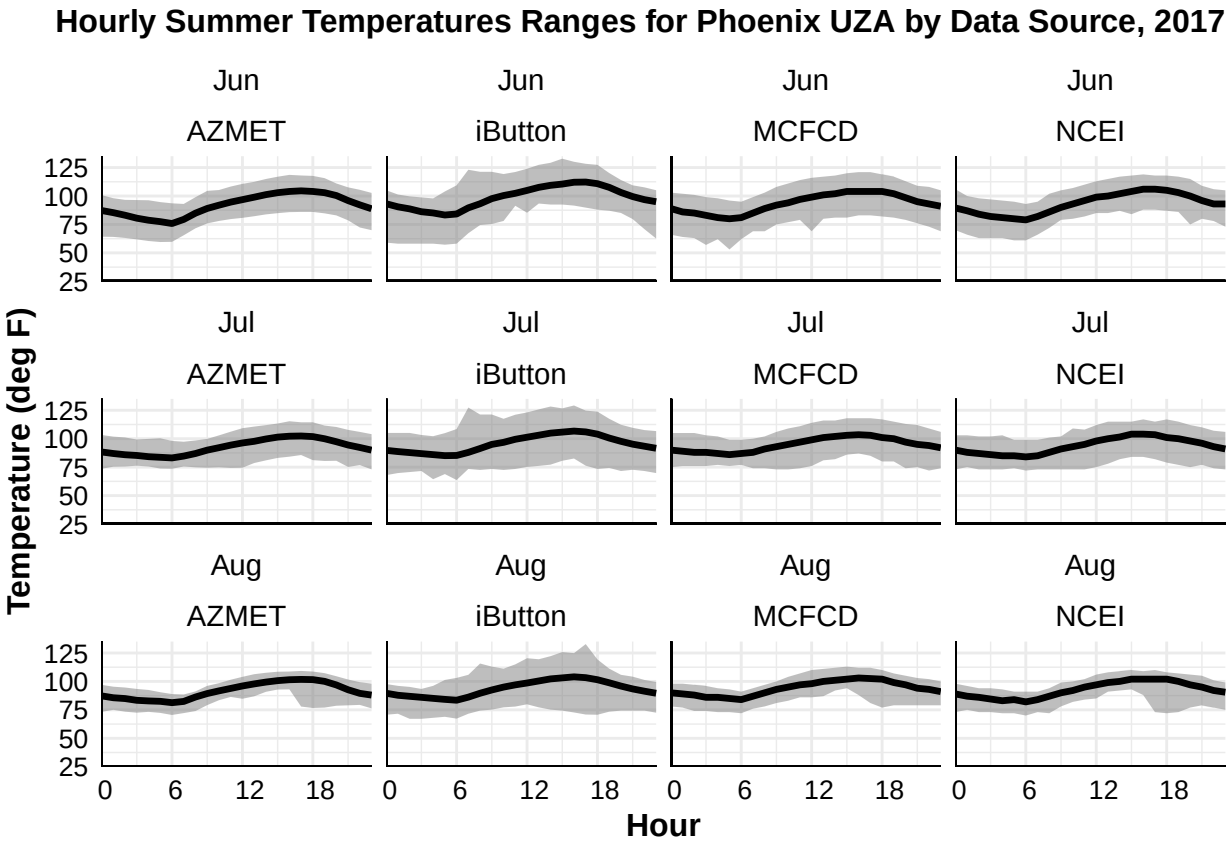
- Calibrated Maricopa Association of Governments (MAG) travel demand and parcel data via modifed version of SUMO (Simulation of Urban MObility) using OpenStreetMap street network data

Plots

Here are the working plots:


Data Source
AZMET
iButton
MCFCD
NCEI
N
Surprise
Peoria
Glendale
Scottsdale
Litchfield Park
Tolleson
Phoenix
Tempe
Mesa
Chandler
0 5 10 15 20 km


Hourly Temperature Ranges by month for Phoenix UZA, 2017
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Temperature (deg F)
125
100
75
50
25
0
6
12
18
Hour



This document was compiled using R 3.5.1, R Markdown, and the following packages:

Package	Version
data.table	1.11.4
deldir	0.1.15
here	0.1
knitr	1.20
lubridate	1.7.4
maptools	0.9.3
raster	2.6.7
rgdal	1.3.4
rgeos	0.3.28
tidyverse	1.2.1
tinytex	0.6
tmap	2.1.1
weathermetrics	1.2.2
xtable	1.8.2