Metadata for cv_hurricane_forecast

Input Data - Data Gathered From Official Sources with No Manipulation

1. ACSSPP1Y2018 - U.S. Census Bureau, 2018 American Community Survey 1-Year Estimates
   - Table S0201 - Selected Population Profiles Table
   - representation_table - Pulls out relevant statistics for comparison
     - NAME - state name
     - S0201_001E - Total Population Estimate
     - S0201_011E - Total Population Estimate 18-24
     - S0201_011M - Margin of Error (MOE) 18-24
     - S0201_012E - Total Population Estimate 25-34
     - S0201_012M - MOE 25-34
     - S0201_013E - Total Population Estimate 35-44
     - S0201_013M - MOE 35-44
     - S0201_014E - Total Population Estimate 45-54
     - S0201_014M - MOE 45-54
     - S0201_015E - Total Population Estimate 55-64
     - S0201_015M - MOE 55-64
     - S0201_016E - Total Population Estimate 65-74
     - S0201_016M - MOE 65-74
     - S0201_017E - Total Population Estimate 75+
     - S0201_017M - MOE 75+
     - S0201_027E - Total Population 18+ Male Estimate
     - S0201_027M - MOE 18+ Male
     - S0201_028E - Total Population 18+ Female Estimate
     - S0201_028M - MOE 18+ Female
     - S0201_058E - Average Household Size Estimate
     - S0201_058M - MOE Household Size
     - S0201_265E - Occupied Housing Units Estimate
     - S0201_265M - MOE Occupied Housing Units
     - S0201_266E - Owner Occupied Housing Units Estimate
     - S0201_266M - MOE Owner Occupied Housing Units
     - S0201_267E - Renter Occupied Housing Units Estimate
     - S0201_267M - MOE Renter Occupied Housing Units
     - S0201_018E - Median Age Estimate
2. Florence_TRACK
   - Best Track Data for Hurricane Florence
   - Used line spatial feature
3. Michael_TRACK
   - Best Track Data for Hurricane Michael
   - Used line spatial feature
4. tl_2019_us_state
   - 2019 TigerLine State Geographies (shapefiles)
5. county_reduced
   - Subset of 2019 TigerLine County Geographies (due to size)

Output Data - Manually Constructed Data Files

1. CountyHousingTotal.csv
   - Housing data from 2013-2017 5 YR ACS (ZCTA Level)
   - Aggregated to the County Level
     - GEOID - State-County FIPS
     - county.occ - Number of Occupied Housing Units in the County
2. CountyPopTotal.csv -
   - Population data from ACSDP5Y2018
   - Aggregated to the County Level
     - GEOID - State-County FIPS
     - county.pop - Population 18+ in County
3. SurveyMaster.csv -
   - Master File for Survey Analysis
     - index - index
     - statefp - state FIPS
     - state - state name
     - countyfp - county FIPS
     - county - county name
     - unique.name - state county
     - hurricane - which hurricane experienced
     - zcta - zcta
     - time.seconds - time to completion of survey (in seconds)
     - track_order - when track question presented relative to other forecast improvements in survey (1, 2, or 3)
     - wind_order - when wind question presented relative to other forecast improvements in survey (1, 2, or 3)
     - rain_order - when rain question presented relative to other forecast improvements in survey (1, 2, or 3)
     - track_rate - rate of improvement presented with track question (1 = -20%, 2 = SQ, 3 = +20%)
     - wind_rate - rate of improvement presented with wind question (1 = -20%, 2 = SQ, 3 = +20%)
     - rain_rate - rate of improvement presented with rain question (1 = -20%, 2 = SQ, 3 = +20%)
     - track_bid1 - random bid, U[0,50], presented for first track improvement question
     - wind_bid1 - random bid, U[0,50], presented for first wind improvement question
     - rain_bid1 - random bid, U[0,50], presented for first rain improvement question
     - track_answer1 - dummy variable (1/0), indicating yes/no answer to first track improvement question
     - wind_answer1 - dummy variable (1/0), indicating yes/no answer to first wind improvement question
     - rain_answer1 - dummy variable (1/0), indicating yes/no answer to first rain improvement question
     - track_bid2 - adjusted bid for track improvement question based on track_answer1 and track_bid1
     - wind_bid2 - adjusted bid for wind improvement question based on wind_answer1 and wind_bid1
     - rain_bid2 - adjusted bid for rain improvement question based on rain_answer1 and rain_bid1
     - track_answer2 - dummy variable (1/0), indicating yes/no answer to second track improvement question
     - wind_answer2 - dummy variable (1/0), indicating yes/no answer to second wind improvement question
     - rain_answer2 - dummy variable (1/0), indicating yes/no answer to second rain improvement question
     - mean.inc18 - ACS5YR2018 mean income for given zcta

- female - dummy(1/0) for female
- experience - dummy(1/0) if experienced hurricane
- evacuate - (Q1) dummy(1/0) if evacuated during hurricane
- voice - (Q20) 1-5 scale (1: very likely - 5: not likely) survey responses considered by public authorities
- action - (Q21) 1-5 scale (1: very likely - 5: not likely) survey responses will initiate changes by NOAA
- long_risk - (Q06) chance local residence getting hit by another hurricane in next 10 years
- age - respondent age
- owner - dummy (1/0) ownership status of residence (1 = own)
- tenure - time living in house
- short_risk - (Q05) chance local residence getting hit by another hurricane in next 5 years
- hurricane_awareness - (Q07) 0-4 scale (0: not informed - 4: very well informed) of information on hurricane risk to current house
- fema_awareness - (Q08) 0-4 scale (0: not informed - 4: very well informed) of information on FEMA floodmaps
- nfip_awareness - (Q09) 0-4 scale (0: not informed - 4: very well informed) of information on NFIP
- damage - dummy(1/0) was home damaged from hurricane (yes/no)
- hh_size - household size
- dist.shore - distance form centroid of zcta to nearest shore (meters) (Ocean or Gulf)
- loss - property damage (1: 0-999, 2:1,000-4,999, 3:5,000-9,999, 4: >10,000, 5: Total Loss)
- fem_20ws - proportion of females within zctas impacted by 20 mph wind speeds (ACS5YR2018)
- fem_30ws - proportion of females within zctas impacted by 30 mph wind speeds (ACS5YR2018)
- fem_40ws - proportion of females within zctas impacted by 40 mph wind speeds (ACS5YR2018)
- fem_50ws - proportion of females within zctas impacted by 50 mph wind speeds (ACS5YR2018)
- meaninc_20ws - mean income of households within zctas impacted by 20 mph wind speeds (ACS5YR2018)
- meaninc_30ws - mean income of households within zctas impacted by 30 mph wind speeds (ACS5YR2018)
- meaninc_40ws - mean income of households within zctas impacted by 40 mph wind speeds (ACS5YR2018)
- meaninc_50ws - mean income of households within zctas impacted by 50 mph wind speeds (ACS5YR2018)
- ownr_20ws - proportion of owner occupied households within zctas impacted by 20 mph wind speeds (ACS5YR2018)
- ownr_30ws - proportion of owner occupied households within zctas impacted by 30 mph wind speeds (ACS5YR2018)
- ownr_40ws - proportion of owner occupied households within zctas impacted by 40 mph wind speeds (ACS5YR2018)
- ownr_50ws - proportion of owner occupied households within zctas impacted by 50 mph wind speeds (ACS5YR2018)
- tax - (Q19) dummy(1/0) believe taxes are too high already (checked/notchecked)
- personal - (Q19) dummy(1/0) believe at risk homes/businesses should cover own losses (checked/notchecked)
- worth - (Q19) dummy(1/0) believe this project is worth funding (checked/notchecked)
- costly - (Q19) dummy(1/0) would like to see changes implemented, but I cannot afford to pay (checked/notchecked)
- trust - (Q19) dummy(1/0) I do not trust the federal government to solve this problem (checked/notchecked)
- mean.inc11 - ACS5YR2011 mean income for given zcta (adjusted for 2018 dollars)
- US_inc18 - Mean income (2018) for zcta's effected by >=30 mph wind speeds
- dif_mean - mean forecast error for 3-day forecast

4. WindSwathMaster.csv -

- Master File of Windswath Experiences for Counties experiencing Hurricanes 2006-2018
  - zcta - ZCTAs within given county
  - statefp - state FIPS
  - countyfp - county FIPS
  - state - state name
  - county - county name
  - unique.name - state county
  - hurricane - hurricane experienced
  - bt_speed_max - maximum experienced wind speed (mph)
  - geoid - State County FIPS

5. ZCTA_AvgData.csv -
   - ZCTA Demographic and Income Data from ACS5Y2018 DP03 and DP05 Tables
     - geoid - ZCTA following ''8600000US"
     - tot.pop18 - Total Population 18+
     - male.pop18 - Male Populaiton 18+
     - female.pop18 - Female Population 18+
     - med.inc18 - Median Income
     - mean.inc18 - Mean Income