Data Dict

- **locational_constant_features:**
  - lat: latitude of location
  - lon: longitude of location
  - elevation__elevation: elevation
  - climateregions__climateregion: Köppen-Geigerclimateclassifications (https://en.wikipedia.org/wiki/K%C3%B6ppen_climate_classification)
    - A (Tropical):
      - Af = Rainforest
      - Am = Monsoon
      - Aw = Savanna, dry winter
      - As = Savanna, dry summer
    - B (Dry):
      - BWh = Hot desert climate
      - BWk = Cold desert climate
      - BSh = Hot semi-arid climate
      - BSk = Cold semi-arid climate
    - C (Temperate Climates):
      - Cfa = Humid subtropical climate
      - Cfb = Temperate oceanic climate or subtropical highland climate
      - Cfc = Subpolar oceanic climate
      - Cwa = Monsoon-influenced humid subtropical climate
      - Cwb = Subtropical highland climate
      - Cwc = Cold subtropical highland climate
      - Csa = Hot-summer Mediterranean climate
      - Csb = Warm-summer Mediterranean climate
      - Csc = Cold-summer Mediterranean climate
    - D (Continental climates):
      - Dfa = Hot-summer humid continental climate
      - Dfb = Warm-summer humid continental climate
      - Dfc = Subarctic climate
      - Dfd = Extremely cold subarctic climate
      - Dwa = Monsoon-influenced hot-summer humid continental climate
      - Dwb = Monsoon-influenced warm-summer humid continental climate
      - Dwc = Monsoon-influenced subarctic climate
      - Dwd = Monsoon-influenced extremely cold subarctic climate
      - Dsa = Mediterranean-influenced hot-summer humid continental climate
      - Dsb = Mediterranean-influenced warm-summer humid continental climate
      - Dsc = Mediterranean-influenced subarctic climate

        - Dsd = Mediterranean-influenced extremely cold subarctic climate
    - E (Polar and alpine climates):
        - ET = Tundra climate
        - EF = Ice cap climate
- **time_features**: startdate of the 14 day period (startdate)
    - startdate
- **mjo_features**: MJO (Madden-Julian oscillation) phase and amplitude. MJO is a metric of tropical convection on daily to weekly timescales and can have a significant impact on the United States sub-seasonal climate. Measurements of phase and amplitude on the target date were extracted over the two-week period.
    - mjo1d__phase: MJO Phase
    - mjo1d__amplitude: MJO Amplitude
- **mei_features**: Multivariate ENSO index (MEI): MEI is a scalar summary of six variables (sea-level pressure, zonal and meridional surface wind components, SST, surface air temperature, and sky cloudiness) associated with El Niño/Southern Oscillation (ENSO), an ocean-atmosphere coupled climate mode.
    - mei__mei (MEI)
    - mei__meirank (MEI rank)
    - mei__nip (Niño Index Phase)
- **recent_forecasts_from_models:** most recent forecasts from weather models
    - cancm30, cancm40, ccsm30, ccsm40, cfsv20, gfdlflora0, gfdlflorb0, gfdl0, nasa0, nmme0mean
- **surface_features**: potential evaporation (pevpr), relative humidity (rhum), sea level pressure (slp), pressure (sfc), precipitable water for entire atmosphere (prwtr), measured precipitation (precip)
    - contest-pevpr-sfc-gauss-14d__pevpr
    - contest-rhum-sig995-14d__rhum
    - contest-slp-14d__slp
    - contest-pres-sfc-gauss-14d__pres
    - contest-prwtr-eatm-14d__prwtr
    - contest-precip-14d__precip
- **sea_ice_concent_features**: sea ice concentration (icec)
    - icec-2010-1, icec-2010-2,...,icec-2010-10
- **sst_features**: sea surface temperature (sst)
    - sst-2010-1, sst-2010-2, ..., sst-2010-10
- **longitudinal_wind_features**: longitudinal wind (wind-vwnd)
    - contest-wind-vwnd-250-14d__wind-vwnd-250
    - contest-wind-vwnd-925-14d__wind-vwnd-925
    - wind-vwnd-250-2010-1, wind-vwnd-250-2010-2,...,wind-vwnd-250-2010-20
    - wind-vwnd-925-2010-1, wind-vwnd-925-2010-2,...,wind-vwnd-925-2010-20
- **zonal_wind_features:** zonal wind (wind-uwnd)
    - contest-wind-uwnd-250-14d__wind-uwnd-250
    - contest-wind-uwnd-925-14d__wind-uwnd-925
    - wind-uwnd-250-2010-1, wind-uwnd-250-2010-2,...,wind-uwnd-250-2010-20
    - wind-uwnd-925-2010-1, wind-uwnd-925-2010-2,...,wind-uwnd-925-2010-20

- **geopotential_height_features:** geopotential height features with different heights (10,100,500,850)
    - contest-wind-h10-14d__wind-hgt-10 (geopotential height at 10 millibars)
    - contest-wind-h100-14d__wind-hgt-100 (geopotential height at 100 millibars)
    - contest-wind-h500-14d__wind-hgt-500 (geopotential height at 500 millibars)
    - contest-wind-h850-14d__wind-hgt-850 (geopotential height at 850 millibars)
    - wind-hgt-10-2010-1, wind-hgt-10-2010-2, ..., wind-hgt-10-2010-10
    - wind-hgt-100-2010-1, wind-hgt-100-2010-2, ..., wind-hgt-100-2010-10
    - wind-hgt-500-2010-1, wind-hgt-500-2010-2, ..., wind-hgt-500-2010-10
    - wind-hgt-850-2010-1, wind-hgt-850-2010-2, ..., wind-hgt-850-2010-10
- **prate_features**: weighted average of monthly/most recent monthly NMME model forecasts for precipitation for week 3-4 and 5-6 (nmme-prate, nmme0-prate)
    - nmme-prate-34w__cancm3, nmme-prate-34w__cancm4,..., nmme-prate-34w__nasa, nmme-prate-34w__nmmemean (weeks 3-4 weighted average of monthly NMME model forecasts for precipitation)
    - nmme-prate-56w__cancm3, nmme-prate-56w__cancm4,..., nmme-prate-56w__nasa, nmme-prate-56w__nmmemean (weeks 5-6 weighted average of monthly NMME model forecasts for precipitation)
    - nmme0-prate-34w__cancm30, nmme0-prate-34w__cancm40,...,nmme0-prate-34w__nasa0, nmme0-prate-34w__nmme0mean (weeks 3-4 weighted average of most recent monthly NMME model forecasts for precipitation)
    - nmme0-prate-56w__cancm30, nmme0-prate-56w__cancm40,...,nmme0-prate-56w__nasa0, nmme0-prate-56w__nmme0mean (weeks 5-6 weighted average of most recent monthly NMME model forecasts for precipitation)
- **tmp2m_features:** the arithmetic mean of the max and min observed temperature.
    - contest-tmp2m-14d__tmp2m: the target. the arithmetic mean of the max and min observed temperature over the next 14 days for each location and start date
    - nmme-tmp2m-34w__cancm3, nmme-tmp2m-34w__cancm4,...,nmme-tmp2m-34w__nasa, nmme-tmp2m-34w__nmmemean (weeks 3-4 weighted average of most recent monthly NMME model forecasts for target label, contest-tmp2m-14d__tmp2m)
    - nmme-tmp2m-56w__cancm3, nmme-tmp2m-56w__cancm4,...,nmme-tmp2m-56w__nasa, nmme-tmp2m-56w__nmmemean (weeks 5-6 weighted average of most recent monthly NMME model forecasts for target label, contest-tmp2m-14d__tmp2m)
    - nmme0-tmp2m-34w__cancm30, nmme0-tmp2m-34w__cancm40,...,nmme0-tmp2m-34w__nasa0, nmme0-tmp2m-34w__nmme0mean (most recent monthly NMME model forecasts for tmp2m and average forecast across those models (nmme0mean))
- **target value:** the arithmetic mean of the max and min observed temperature over the next 14 days for each location and start date
    - contest-tmp2m-14d__tmp2m