Title: Enabling Discovery of NOAA NEXRAD Data on the Commercial Cloud

Office: National Oceanic and Atmospheric Administration, National Centers for Environmental Information (NCEI), Center for Weather and Climate (CWC).
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Description of the Challenge:
Enable users to easily discover NOAA NEXRAD Weather Radar data that are relevant to their application.

NOAA recently transmitted the entire archive of NEXRAD Level II (volume scan) weather radar data to several of its Big Data Partnership collaborators. Amazon Web Services (AWS) has made this archive, and the latest NEXRAD observations, freely available to the public through its S3 service. These data are organized by time and by geographic station.

For users to more efficiently find these data for use in their application, a catalog of holdings and cross references to useful search criteria (geolocation, state, population, drainage basin) would aid in the search, discovery, and access to this data source.

Hopeful Outcome:
An API or tool that allows users to easily find NEXRAD data on Amazon AWS 33 that is pertinent to their application.

Create a prototype or concept for design that will allow user to users to select a view for:
  ● a geographic region of interest
  ● time period (years)
  ● link to storm events or other weather/climate events
  ● link to US Census geographic, economic, or population data

Skills Needed:
Coding/development experience, basic mathematical knowledge, some meteorological awareness useful but not required.

Data Sets Required:
  ● https://aws.amazon.com/noaa-big-data/nexrad/
  ● https://s3.amazonaws.com/noaa-nexrad-level2/index.html
  ● http://noaa-nexrad-level2.s3.amazonaws.com/
  ● https://www.ncdc.noaa.gov/nexradinv/
  ● https://www.ncdc.noaa.gov/swdi/#Intro
  ● https://www.ncdc.noaa.gov/stormevents/