

## Data Sets (for Scientists & Engineers)

There are a few contemporary uses of Big Data in modern engineering, and many more in potential. The trick is find and access the right data for engineering applications. Today, engineers can expect to take advantage of power grid data (such as load measured by a utility); municipal data (such as the City of Chicago's WindyGrid); and materials informatics (such as the nascent Materials Genome Initiative dataset). Other applications include chemical process data, sensor data, aggregated medical data, and geospatial information systems, and disciplines range from agricultural to nuclear engineering.

One hitch (at this point) is that many institutions have loads of data, but no real idea what can be done with it. They often either stockpile it (business) or make it public (government), and hope that something good will happen as a result.

### CATEGORIES OF INTEREST

- Agriculture
- Astronomy (SDSS)
- Bioinformatics & genomics
- Census
- Chemical processing
- Control systems & sensor data
- Energy
- Geographic (SRTM, etc.)
- Geospatial information systems
- Manufacturing
- Materials informatics (MGI, NIST)
- Medical (NIH, CDC)
- Meteorological/climatological
- Municipal
- Particle physics (CERN, Fermilab)
- Power grid (EPRI, etc.)
- Satellite telemetry

### SELECTED PUBLIC DATA SETS

- [data.gov](http://data.gov)
  - [/climate](#) historic data, projections
  - [/energy](#) price, usage, projections
  - [/geospatial](#) location, air & water quality
  - [/health](#) epidemics, statistics
  - [/manufacturing](#) trade, inventory
  - [/safety](#) accidents, pollution
  - [/research](#) domain-specific data
  - [/weather](#) meteorology
- [data.nasa.gov](http://data.nasa.gov)
  - [/nasa-standards](#) technical standards
  - [/national-space-science-data-center-master-catalog](#) space science archive
  - [/sdo](#) Solar Dynamics Observatory
  - [/nasa-earth-exchange](#) surface data
- [data.cityofchicago.org](http://data.cityofchicago.org) maps, traffic, services, environmental data
- [data.illinois.gov](http://data.illinois.gov) maps, traffic, population
- [archive.ics.uci.edu/ml](http://archive.ics.uci.edu/ml) UCI Machine Learning Repository
- [opensciencedatacloud.org/publicdata](http://opensciencedatacloud.org/publicdata) aggregator of public data sets
- [datamarket.com/data/list/?q=provider:tsdl](http://datamarket.com/data/list/?q=provider:tsdl) Time Series Data Library
- [ncdc.noaa.gov/cdo-web/datasets](http://ncdc.noaa.gov/cdo-web/datasets) historical meteorological data
- [madis.noaa.gov](http://madis.noaa.gov) real-time meteorological data