World’s largest collection of population data

- Censuses & surveys
- Integrated over time & place
- Ease of access, use, understandability

USA
U.S. Census and American Community Survey microdata from 1850 to the present.

CPS
Current Population Survey microdata including basic monthly surveys and supplements from 1960 to the present.

INTERNATIONAL
Census microdata covering 85 countries from 1960 to the present.

NAPP
Offers microdata from the 19th and early 20th centuries.

TIME USE
U.S. and international time use data for 1965 to the present.

NHGIS
Tabular U.S. Census data and GIS boundary files from 1790 to the present.

DHS
Demographic and Health Surveys integrated for analysis across time and space from 1980 to the present.

HIGHER ED
Data on the science and engineering workforce in the U.S. from 1993 to the present.

HEALTH SURVEYS
Health Survey data from the National Health Interview Survey and the Medical Expenditure Panel Survey.

TERRA
Integrated data on population and the environment from 1960 to the present.
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Coming Soon – International Aggregate Data
Utility for GeoEDF Science Use Cases

• Flood modeling
  • Socioeconomic vulnerability assessment
  • Impact analysis of recorded floods

• Food security
  • Sub-national socioeconomic drivers
  • Agricultural census context
Create IPUMS NHGIS Data Extracts

Below we provide examples in R, Python and curl showing how to work with our Aggregate Data Extract API to create and manage NHGIS aggregate data extracts.

Get your key from [https://account.ipums.org/api_keys](https://account.ipums.org/api_keys). Make sure to replace 'MY_KEY' (all caps) in the snippet below with your key.

Load Libraries and Set Key

You may have to install the {httr} and {jsonlite} libraries if they are not already installed

```python
import requests
from json import loads

my_key = 'MY_KEY'
```

Submit a Data Extract Request

To submit a data extract request you need to pass a valid JSON-formatted extract request in the body of your POST. See below for an example. The required fields are `description` and `data_format`, and either `dataset` or `time_series_tables`. If `time_series_tables` is specified, then `time_series_table_layout` also needs to be specified.

Some notes about the extract request JSON payload:

- The labels to use for datasets, data_tables and geog_level can be discovered via our metadata API endpoints.
- The valid values for data_format are: csv, csv_no_header, fixed_width. csv_no_header adds a second, more descriptive header row. Contrary to the name, csv_no_header still provides a minimal header in the first row.
- The valid values for time_series_table_layout are: time_by_row_layout, time_by_column_layout, time_by_file_layout. More documentation about the time series layout options can be found on the NHGIS website.

```python
my_headers = {'Authorization': my_key}

er = {
    "data_format": "csv_header",
    "description": "testing123"
}
```
Work In Progress / On the Horizon

• IPUMS USA API
• Spatial database API
• R and Python wrappers for APIs
  • Extending existing ipumsr package
• Microdata tabulator API
  • Extending and exposing internal API
GeoEDF Collaboration Opportunities

• Develop data connectors around IPUMS APIs*

• Collaboration around data processors for aggregating gridded data

* Recently named to API World’s Top 300 innovations for 2019