CitySDK Overview

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Accessibility
Case Study: Housing Accessibility

Evaluation Result

Location

Sioux Falls

20009
Latitude: 43.482376
Longitude: -96.7278079999999

Evaluation Score:

10
Inaccessible place.

Housing:

0 No apartment nearby.

Mobility:

15 Somewhat walkable & No metro mobility

Safety:

20 Not safe region.

Health & Special Services:

0 No hospital nearby.

Disability Community:

16 No disability community.
Healthy Food Options
Case Study: Purshable

Available Items
- Apples, 1lb
- Oranges, 1lb
- Grapes, 1lb
- Pineapple, 1lb
- Grapes
- Apples
Skills and STEAM Programs
Case Study: “AirBNB for Tech Spaces”
Problems we are trying to solve

“Improve access and usability of Census data.”

“Bridge the federal and local data gap.”

“Enable value creation with government data assets.”

“Build apps in hours instead of days or weeks.”
What is the CitySDK

1. Set of Javascript tools, guides, and examples on Github to build web applications
2. Enhances usability and access to Census data through public APIs
3. Streamline how open data is used to build apps for cities through open-source tools
4. Support rural communities through USDA integration
5. Foster an ecosystem to improve interoperability across data silos at federal and local level
Open-Source Project

http://uscensusbureau.github.io/citysdk/
How it Works:
Technical Capabilities
Before: Washington DC Population Example (Census ACS API)

1. Get Washington, D.C.'s FIPS code by co-ordinates using the GeoCoder API
2. Determine the appropriate variable (ex: B06011_001E) from a list of every variable in the ACS
3. Request the data for that specific variable and FIPS combination.
4. Extract the data from the response.

After: CitySDK

1. Build your request in a JSON object
2. Issue the request to the SDK
3. Handle the response object

Benefits to user when using CitySDK:
- Abstracts multi-API requests into a single call.
- Allows for the aliasing of common variables.
- Modular architecture supports integrating other APIs
Getting Started with CitySDK

Let's try getting some data

You can request data from the Census's API by specifying variables in your request. You can find more details about variable names and codes on our github examples.

Try it out with the code on the right!

Try tinkering with the example to add sublevels, or query by a city, to see what happens.

You can use the same "variables" format tags when requesting geography data. Doing this will request the data for each geographical feature, and attach the data to the "properties" tag of that feature.

Unifying multiple APIs

Let's try out another API - the USDA's Farmer's Market API. We've already imported the module, so all you need to do is put your zip code in the request below to find Farmer's markets near you!

http://uscensusbureau.github.io/citysdk/gettingstarted.html
Acquiring Census Data

Example of simple request for State of Maryland geography

```javascript
var request = {
  "state": "MD",
  "level": "state"
};

var callback = function(response) {
  map.data.addGeoJson(response);
};

census.GEORequest(request, callback);
```
Partner Integrations

US Census Bureau
- Guide to the Census CitySDK Module
- Demo: Interactive Query Builder

Leaflet
- Leaflet is an Open-Source JavaScript library for web and mobile friendly interactive maps. It uses the GeoJSON format which is supported by the
  - Demo: Leaflet NYC Boroughs

Housing and Urban Development
- Access data on FHA Loans, HUD Insured Properties, Fair Market Rents and dozens of other datasets related to national housing and property issues.
  - CitySDK HUD Module
  - Demo: Housing Loans in Pittsburgh

US Department of Agriculture
- Discover fresh food near you with the National Farmer’s Market directory module.
  - CitySDK Farmer’s Market Module
  - Demo: Farmer’s Markets in California

US Department of Energy
- Access the extensive datasets of the U.S. Energy Information Agency using this module. Browse various categories and use their data series in your
  - CitySDK Energy Information Agency Module
  - Demo: Energy Information Agency browser

ESRI
- Governments, industry leaders, academics, and nongovernmental organizations (NGOs) use ESRI to connect with analytic knowledge they
  - ESRI ArcGIS Module
  - Demo: Chart Showing DC School Enroll

Socrata
- The Socrata platform is commonly used by municipal, state, and federal agencies use to distribute their data.
  - CitySDK Socrata Module
  - Demo: Chicago Payroll Query

Google Maps
- There are several CitySDK examples that utilize Google Maps to create interactive web apps.
  - Demo: Farmer’s Markets in California
  - Demo: Housing Loans in Pittsburgh

Public Spaces for Innovation
- The Data Science for Social Good Fellows at the University of Chicago have created datasets and a tool for community organizers using the CitySDK.
  - Demo: Innovation Ecosystems

Bing Maps
- CitySDK apps can be built with Microsoft Bing’s mapping technology.
  - Demo: Using Bing Maps with the CitySDK
What’s Next

1. Pilot with North Carolina state data center network and rural communities
2. Continue collaboration with ecosystem participants
3. Deepen our open-source engagement with users
4. Add support for smart cities
The White House Smart City Forum

Community Focus

Improved Access to Government Data

Agile Playbook for Code for America Brigades