

Build an App using Open Data

Maina Dhar

Integrate Open Data in a community-based application and provide Government Oversight

What is Open Data?

The OPEN Government Data Act builds on President Obama's May 2013 Open Data Policy. The policy mandates government agencies to publish all their information as open data which is available freely allowing for greater transparency.

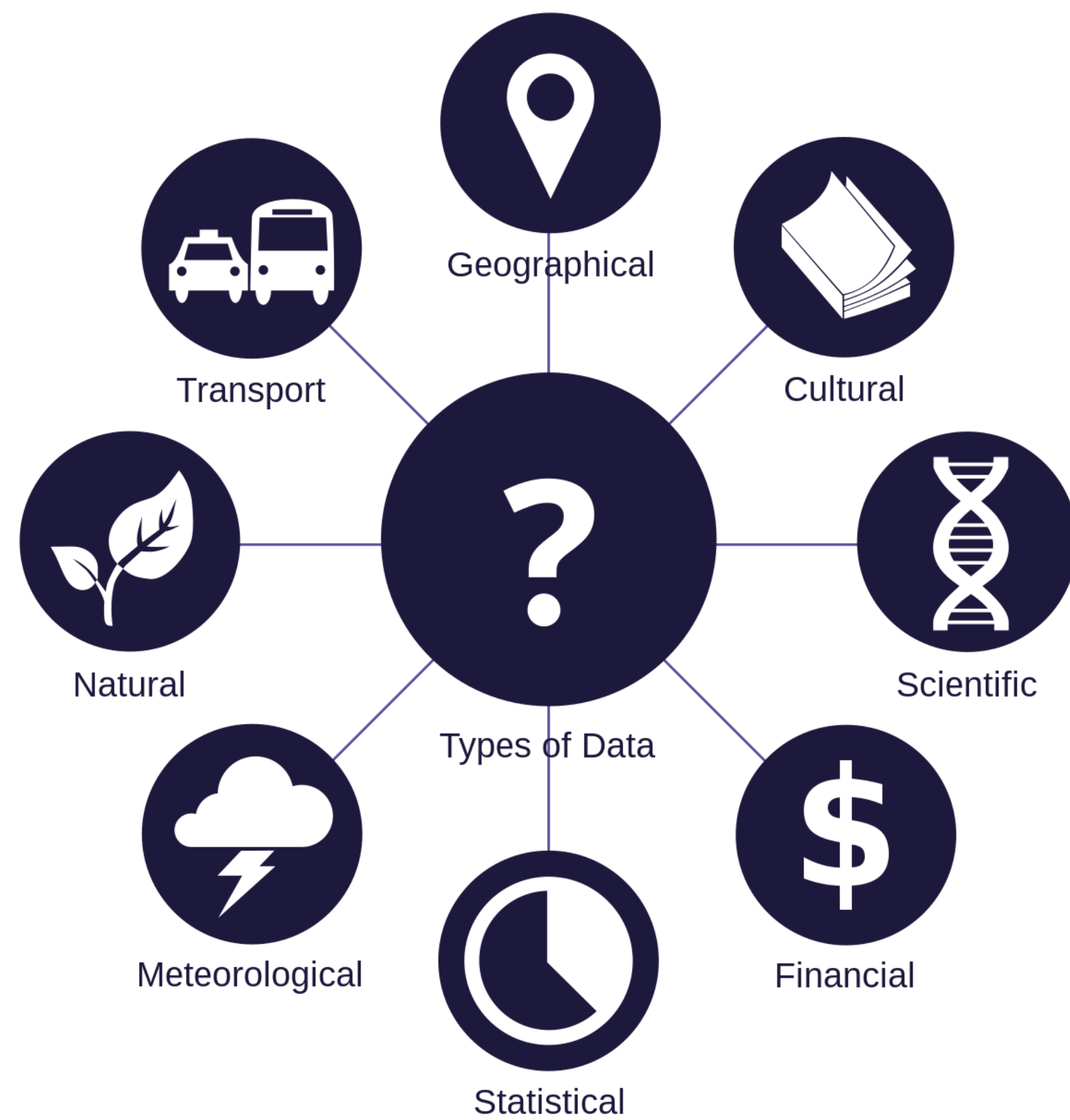


Figure 1: The web diagram displays various types of Open Data which can be used in Apps

Open Data Websites

- <https://data.worldbank.org/>
- <https://www.who.int/data/gho/>
- <https://www.dbpedia.org/>
- <https://registry.opendata.aws/>
- <https://data.fivethirtyeight.com/>
- <https://www.census.gov/data.html>
- <https://www.data.gov/>

Multi-step Approach

- Use API to get Data
- Set Search Criteria
- Define Where Clause
- Create a URL
- Create HTTPS Connection
- Set Request Property
- Error Handling
- Capture Return Data
- Disconnect
- Release Resources

Return Data (JSON)

```
"type": "FeatureCollection",
"name": "Restaurant_Inspections",
"crs": { "type": "name", "properties": {
  "name": "urn:ogc:def:crs:OGC:1.3:CRS84" }
}, "features": [{ "type": "Feature", "properties": {
  "OBJECTID": 1, "Facility_ID": "FA0308331",
  "Facility_Name": "PANDA EXPRESS", "Address": "500
12TH ST", "City": "OAKLAND", "State": "CA", "Zip":
"94607", "Violation_Description": "Not Proper hot and
cold holding temperatures", "Longitude": -
121.97350982, "Latitude": 37.504449, "Activity_Date":
"2021-09-08T00:00:00Z"}
```

Application Ideas

- Restaurant Inspection
- Green Buildings
- COVID-19 Dashboard
- Bike Lanes Mapping
- Crime Data
- Surplus Property
- Social Services Benefits
- County Budget Analysis

API in Action

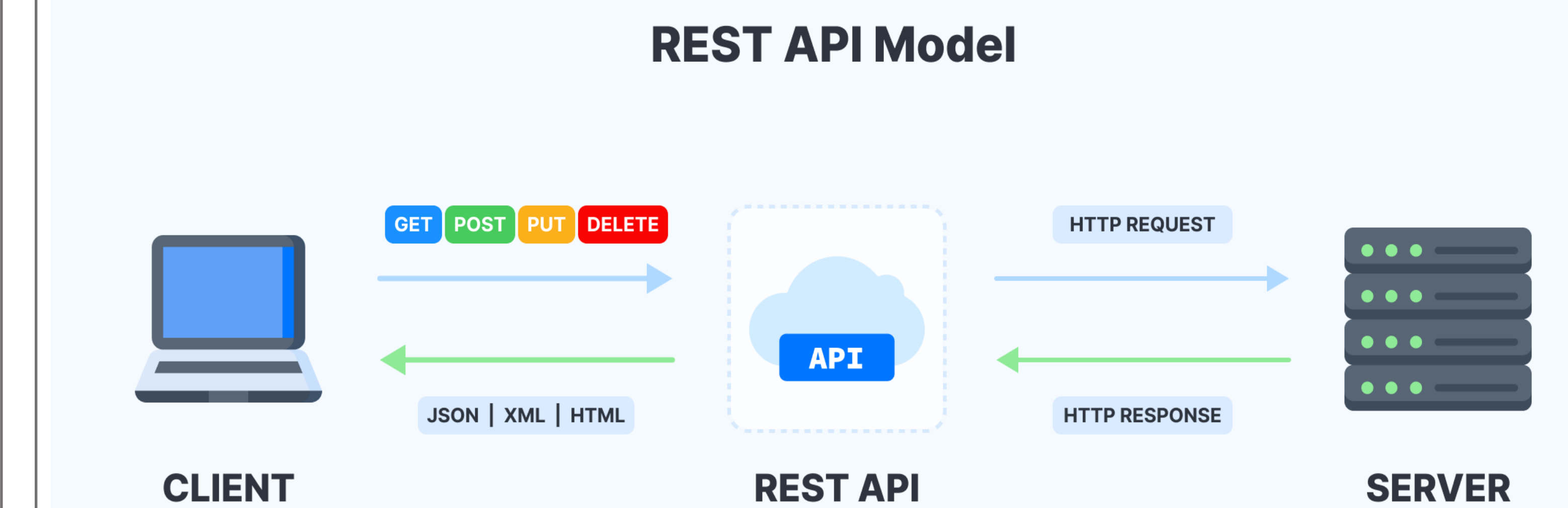


Figure 2: Connect the client (App) with the Open Data Rest API (Application Programming Interface) resource

Parsed Data (using JSON Simple API)

Facility_ID:	FA0308331
Facility_Name:	PANDA EXPRESS
Address:	500 12TH ST
City:	OAKLAND
State:	CA
Zip:	94607
Violation_Description:	Not Proper hot and cold holding temperatures
Longitude:	-121.97350982
Latitude:	37.504449

Resources

- Neel.prakash. "An Overview of JSON API: A Text-Based Data Exchange Format." *What Is JSON API? Overview of JSON API: Text-Based Data Exchange*, <https://www.valuebound.com/resources/blog/overview-of-json-api>.
- *What Is Open Data?*, <https://opendatahandbook.org/guide/en/what-is-open-data/>.
- "The White House." *National Archives and Records Administration*, National Archives and Records Administration, <https://obamawhitehouse.archives.gov/>.