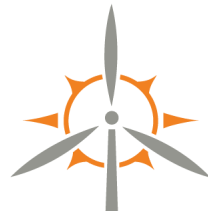


Using the ArcGIS JavaScript API in a Hybrid Geospatial Architecture

Presented by **Bradley Andrick**

Lead Software Engineer @ Theorem Geo Inc.



THEOREM **GEO**



info@theoremgeo.com
bandrick@theoremgeo.com

Advanced Spatial Technology Solutions



Transmission &
Distribution, Constr &
Maint



Lake Services & Water
Strategy



Forestry & Vegetation
Management



Logistics & Resource
Optimization



Video Management



Regulatory Compliance



Aviation



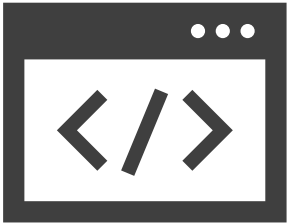
Meteorology

Serving the electric & gas utility industry
for more than a decade.

Let's start with a
Scenario:

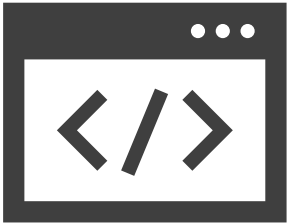
Scenario:

Scenario:



Custom Web App

Scenario:

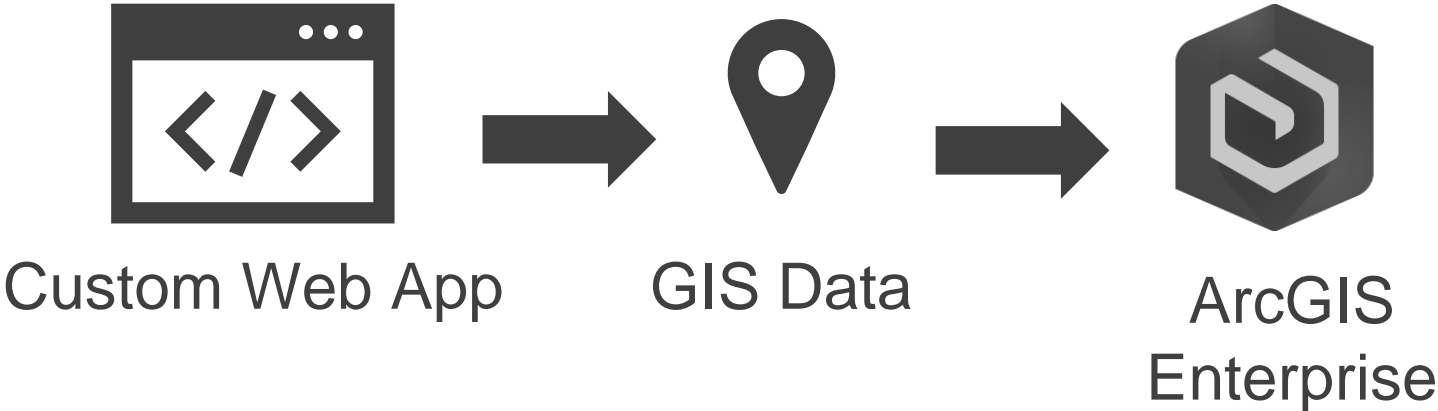


Custom Web App



GIS Data

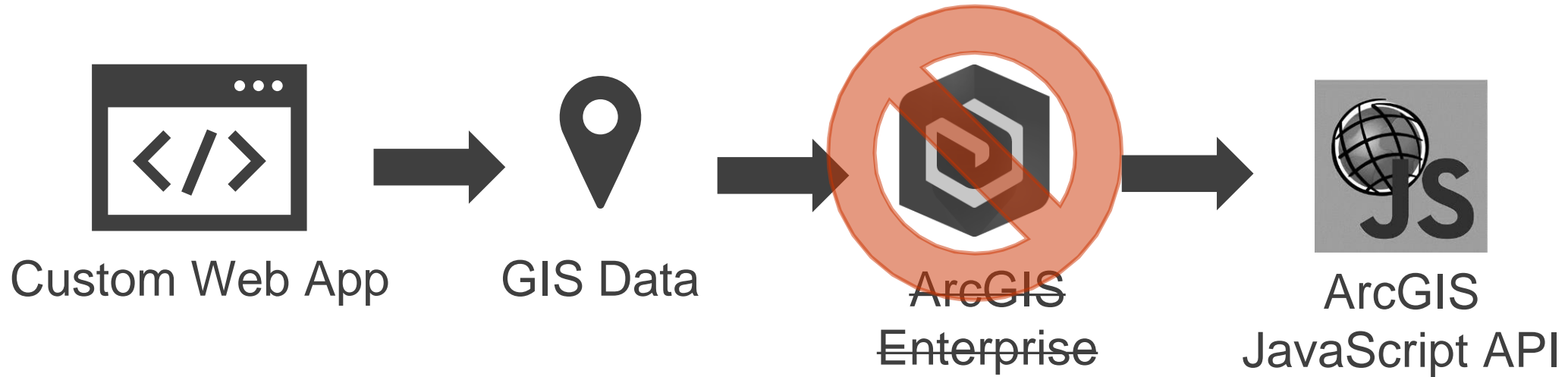
Scenario:



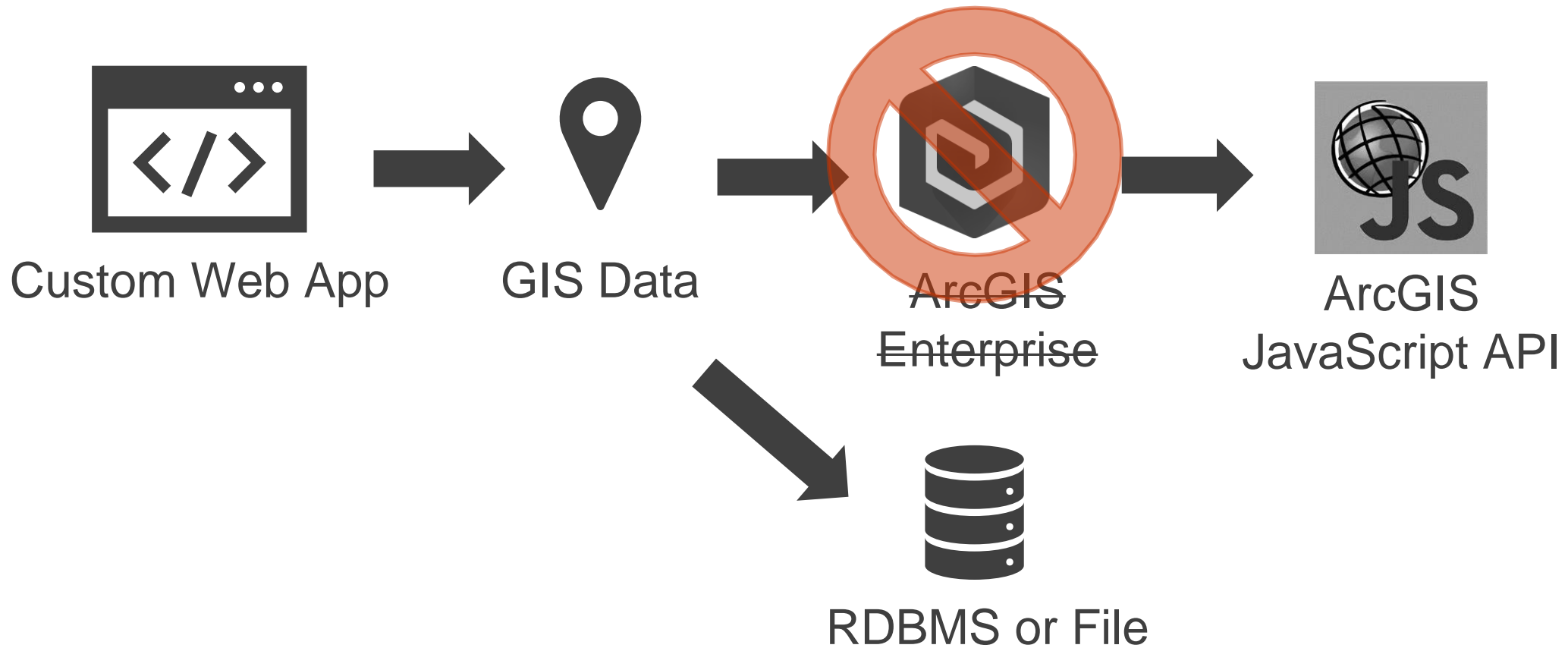
Scenario:



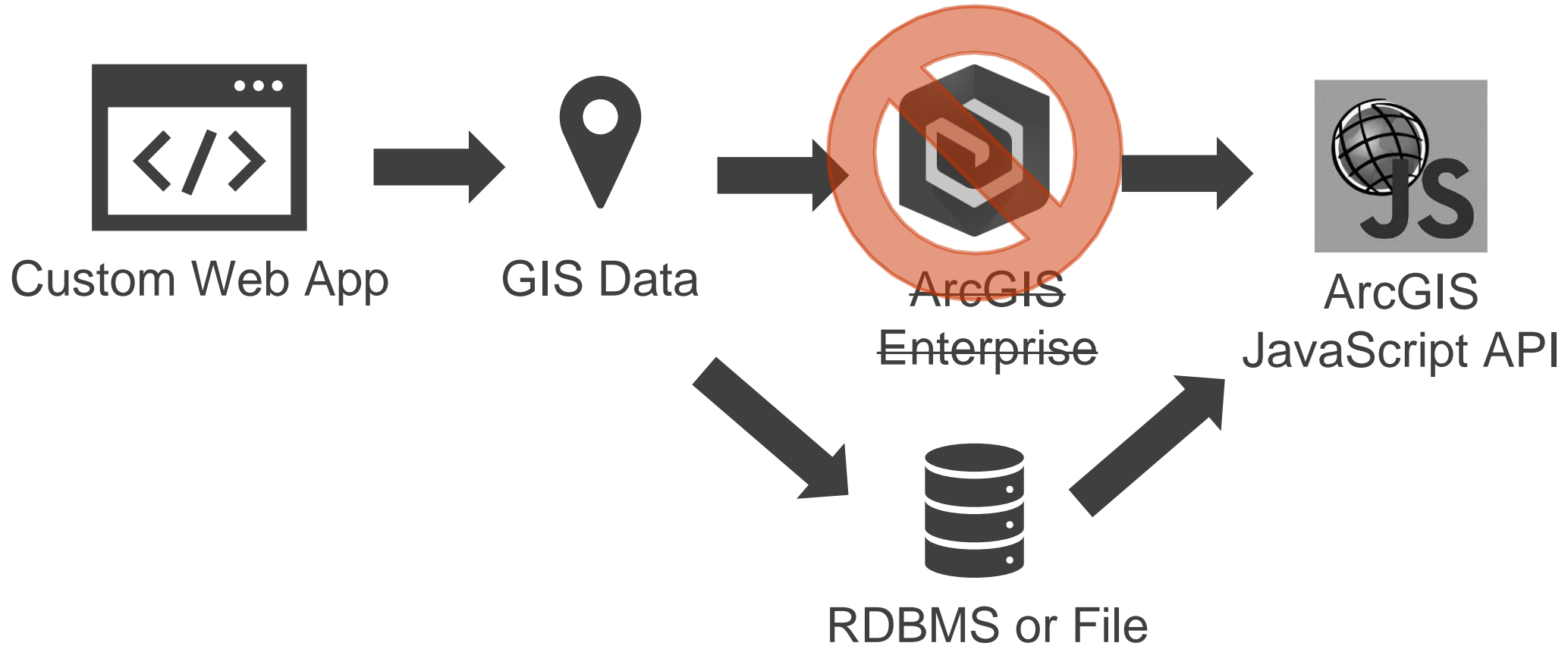
Scenario:



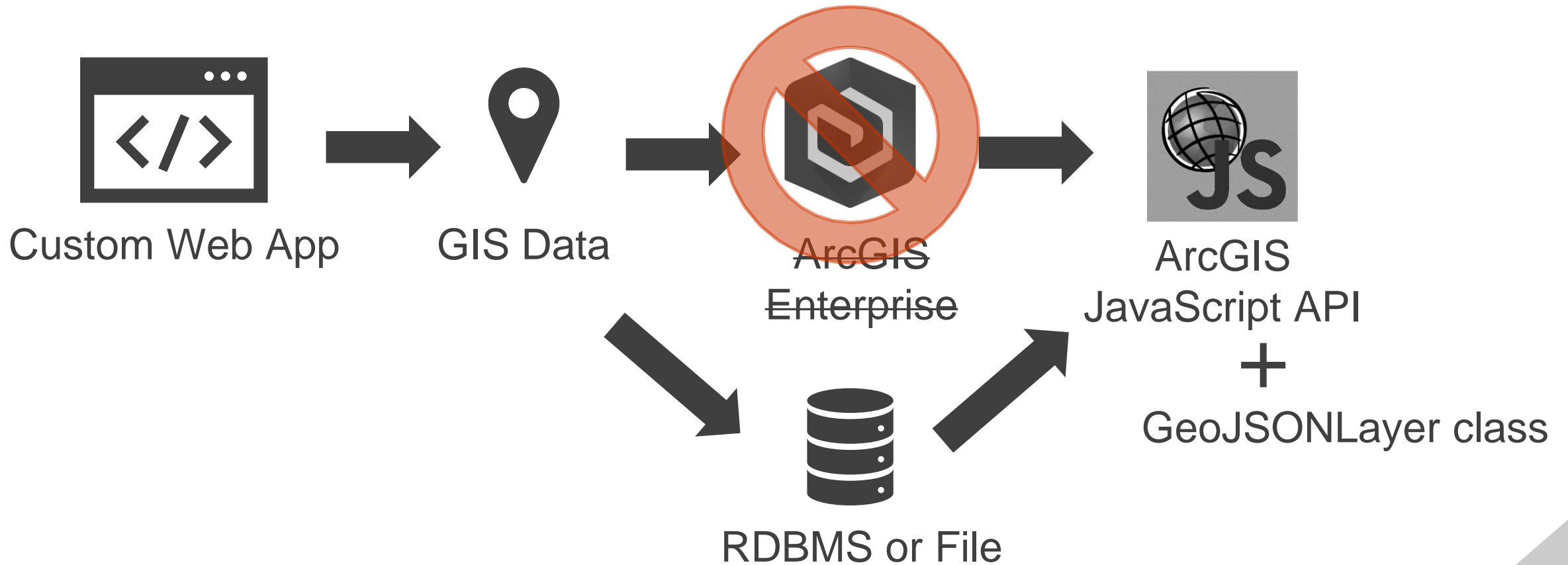
Scenario:



Scenario:



Scenario:



GeoJSONLayer

GeoJSONLayer



GeoJSON

GeoJSON

JavaScript Object Notation (JSON)

GeoJSON

JavaScript Object Notation (JSON)

+

Geographic Data

GeoJSON

JavaScript Object Notation (JSON)

+

Geographic Data

=

a format for encoding geographic data structures

GeoJSON

a format for encoding geographic data structures

GeoJSON

a format for encoding geographic data structures

```
{
  "type": "Feature",
  "geometry": {
    "type": "Point",
    "coordinates": [33.82, -116.53]
  },
  "properties": {
    "name": "Palm Spring Convo"
  }
}
```

GeoJSON

a format for encoding geographic data structures

```
{  
  "type": "Feature",  
  "geometry": {  
    "type": "Point",  
    "coordinates": [33.82, -116.53]  
  },  
  "properties": {  
    "name": "Palm Spring Convo"  
  }  
}
```

GeoJSON

a format for encoding geographic data structures

```
{
  "type": "Feature",
  "geometry": {
    "type": "Point",
    "coordinates": [33.82, -116.53]
  },
  "properties": {
    "name": "Palm Spring Convo"
  }
}
```

GeoJSON

a format for encoding geographic data structures

```
{
  "type": "Feature",
  "geometry": {
    "type": "Point",
    "coordinates": [33.82, -116.53]
  },
  "properties": {
    "name": "Palm Spring Convo"
  }
}
```

```
{
  "type": "FeatureCollection",
  "features": [
    {
      "type": "Feature",
      "geometry": {
        "type": "Point",
        "coordinates": [33.82, -116.53]
      },
      "properties": {
        "name": "Palm Spring Convo"
      }
    }
  ]
}
```



```
const mygeojson = '{
  "type": "FeatureCollection",
  "features": [
    {
      "type": "Feature",
      "geometry": {
        "type": "Point",
        "coordinates": [33.82, -116.53]
      },
      "properties": {
        "name": "Palm Spring Convo"
      }
    }
  ]
}'
```

Accessing GeoJSON

Accessing GeoJSON

**Store/GET
from a file**

**Build data structure
on demand**

Accessing GeoJSON

**Store/GET
from a file**

.json
.geojson

**Build data structure
on demand**

DB > API >
return geojson

ArcGIS API for JavaScript GeoJSONLayer Class

ArcGIS API for JavaScript GeoJSONLayer Class

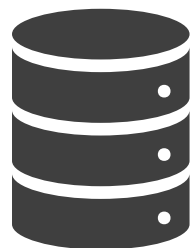
Class: `esri/layers/GeoJSONLayer`

GeoJSONLayer

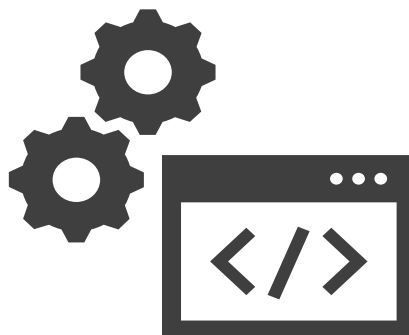
```
const fileURL = "https://mywebsite.com/file/palmsprings.geojson"  
// OR  
const apiURL = "https://mywebsite.com/api/querydb/palmsprings"  
  
// construct the layer  
const geoJSONLayer = new GeoJSONLayer({  
  url: fileURL, // OR apiURL  
  copyright: "myclient",  
});  
  
map.add(geoJSONLayer); // adds the layer to the map
```

Demo!

Demo!



Client
Postgres/PostGIS
database Storing
points as
geometry data type



Node.js & Express.js
API
to query SQL and
format as geojson



ArcGIS API for
JavaScript
to call API endpoint
and render data on
map

Using the ArcGIS JavaScript API in a Hybrid Geospatial Architecture

Presented by **Bradley Andrick**

Lead Software Engineer @ Theorem Geo Inc.

