Temporal and Spatial pattern of Vulnerability to Flash-Flood in Texas
Project Status 2

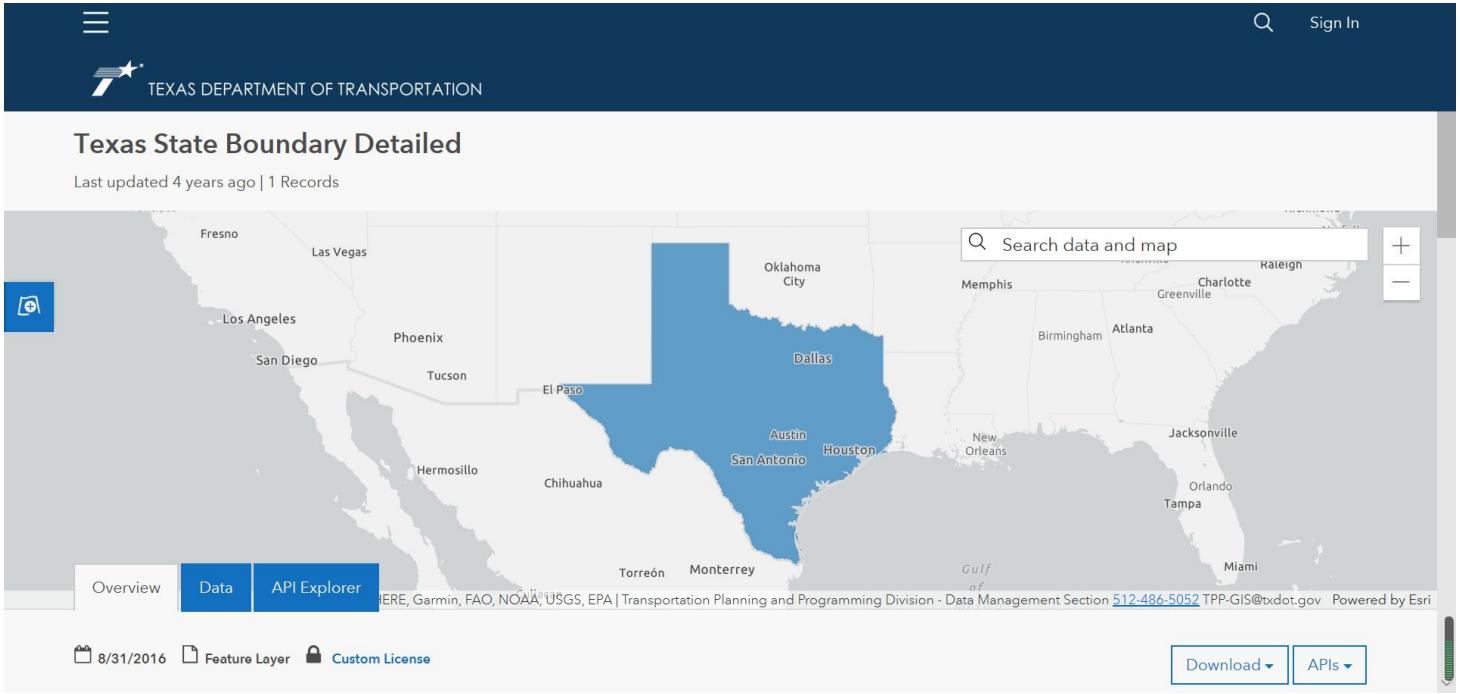
Team 4
Matthew Li, Zachary Litton, Evan Ferguson, Connor West, Alexander Starkes

Data Processing

- Related the event data with the county information data.
  - Calculated the time length and average hourly damage of each event
  - Created another table, calculated the count, sum, mean, min and max of economic damages and time length.

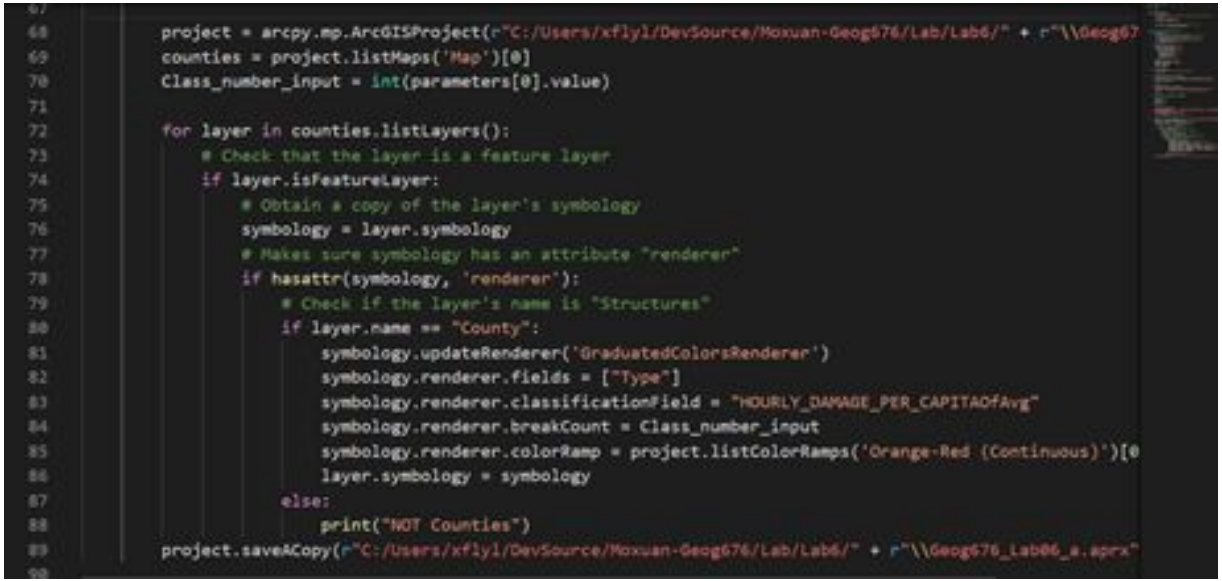
New Data

- Shapefile of Texas counties
  - Provided by Texas Department of Transportation



Program development

- Python Toolbox
  - Graduated Color Renderer
  - Using the average hourly damage caused by flashflood, which can somehow reflect the vulnerability



```
project = arcpy.mp.ArcGISProject(r"C:/Users/xflyl/DevSource/Moxuan-Geog676/Lab/Lab6/" + r"\\Geog67
counties = project.listMaps('Map')[0]
Class_number_input = int(parameters[0].value)

for layer in counties.listLayers():
    # Check that the layer is a feature layer
    if layer.isFeatureLayer:
        # Obtain a copy of the layer's symbology
        symbology = layer.symbology
        # Makes sure symbology has an attribute "renderer"
        if hasattr(symbology, 'renderer'):
            # Check if the layer's name is "Structures"
            if layer.name == "County":
                symbology.updateRenderer('GraduatedColorsRenderer')
                symbology.renderer.fields = ["Type"]
                symbology.renderer.classificationField = "HOURLY_DAMAGE_PER_CAPITAOfAvg"
                symbology.renderer.breakCount = Class_number_input
                symbology.renderer.colorRamp = project.listColorRamps('Orange-Red (Continuous)')[0
                layer.symbology = symbology
            else:
                print("NOT Counties")
project.saveACopy(r"C:/Users/xflyl/DevSource/Moxuan-Geog676/Lab/Lab6/" + r"\\Geog676_Lab06_a.aprx"
```

Thank you all for attention
Any Question?