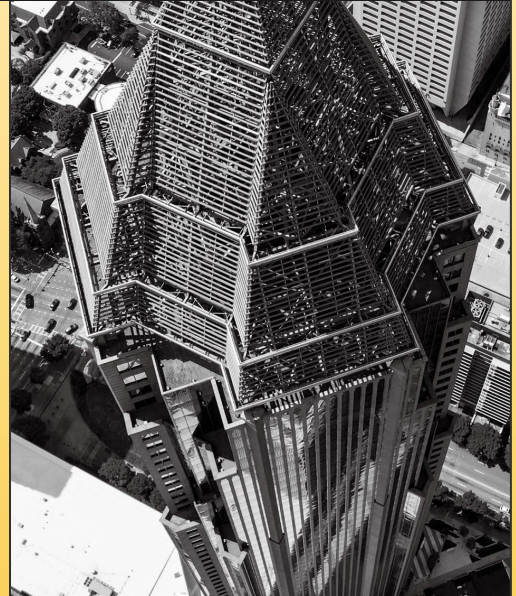




Crime Analysis

Atlanta, GA

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Background

- Crime rate has a direct correlation to property value and the allocation of resources among neighborhoods.
- Within Georgia, more than 91% of the communities have a lower crime rate than Atlanta.
- A dashboard using data from the 2021 Atlanta Police Department crime records was created to visualize crime in Atlanta.



Cleaning the Data

```
cleaned_crime.rename(columns=  
={'UC2_Literal': 'crime_type'  
})
```

```
del crime_data['ibr_code']
```

- Jupyter notebook was used to clean the dataset.
- Columns were renamed and deleted, and null values were deleted.

```
engine =  
create_engine(f'postgresql://p  
ostgres:{password}@localhost:5  
432/atl_crime_db')
```

```
if not  
database_exists(engine.url):  
  
create_database(engine.url)
```

Delivering the Data

```
Cleaned_crime_df.to_sql('atl_c  
rime2021', con=engine,  
if_exists = 'append', index =  
False)
```

```
@app.route('/')
def index():
    conn = get_db_connection()
    cur = conn.cursor()
    cur.execute('SELECT * FROM
atl_crime2021;')
    atl_crime2021 = cur.fetchall()
    cur.close()
    conn.close()
    return render_template('index.html',
atl_crime2021 = atl_crime2021)
```

App.py Connection

```
@app.route('/crimedata')
def crimedata():
    conn = get_db_connection()
    cur = conn.cursor()
    cur.execute('SELECT * FROM
atl_crime2021;')
    desc = cur.description
    column_names = [col[0] for col in
desc]
    data =
[dict(itertools.zip_longest(column_names,
row))
    for row in cur.fetchall()]
    cur.close()
    conn.close()
    return jsonify (data)
```

Crime Rate Dashboard

Dashboard Features:

- Visualize most common crime types in Atlanta
- Allow user to select their neighborhood from drop down menu to filter visualizations
- Visualize crime on a map of Atlanta- toggle between two views: police zone and crime type.

Conclusion

- The most common type of crime in Atlanta is Larceny.
- Zone 5 covers the least amount of area on map, but has the same amount of crime as larger zones.
- Atlanta should develop a similar dashboard for its citizens to utilize like many other large cities.



Limitations



- Due to the amount of distinct neighborhoods in our dataset, it was difficult to analyze which neighborhood in Atlanta is the safest from our dashboard.
- Adding population for neighborhoods would improve the ability to rate safety based on crime/1,000 people.
- Some neighborhoods have unreported crimes so our dataset may not be comprehensive.

Further Considerations

- Include multiple years to help view the trend over time.
- Use datasets with more detailed information about crime in different neighborhoods.
 - Our dataset was grouped by police zone which was very broad.
 - More info about the type of offenders
- Dashboard Improvements
 - Add a search bar to the drop down menu.
 - Alphabetize drop down menu.
 - Real time updates from the database.
 - Utilize Chart.js to include more interactivity for user.
 - Include search by crime type filter for neighborhoods or full map
 - Filter map based on dropdown selection

Questions?

Thank You!