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Project Proposal Overview:

Our project aims to identify the residential and commercial structures with the highest flood risk in New York City. We will develop a ranking system, find those areas based on risk level, and prioritize the most risky buildings for analysis. We envisage the final product of our work as a direct marketing tool for the insurance industry.

Data Sources:

The source of our project's risk data is the City of New York's <u>environment floodplain dataset</u>. We may use ChatGPT to tag the data. We will create a machine-learning algorithm to process the data. The Google Maps API is an excellent candidate to produce a visualization of the resultant set of structures with the highest flood risk in New York City.

Possible additional areas of study:

If time permits, we will use the following datasets to extend our project:

- Study the relationship between water quality and flood risk
- Study the relationship between poverty and flood risk
- Study the relationship between construction materials and flood damage
- 1. City of New York environment floodplain dataset link:

https://data.cityofnewyork.us/Environment/Floodplain/g62a-qs52

2. City of New York environment water quality link:

https://data.cityofnewyork.us/Environment/map-water-quality/r7js-zsqm/data

3. Federal poverty dataset link:

https://catalog.data.gov/dataset/?q=poverty

4. City of New York building materials dataset:

https://data.cityofnewyork.us/City-Government/Building-Elevation-and-Subgrade-BES-/bsin-59h

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