Hydrant distribution and density: By analyzing the geographical distribution and density of fire hydrants, it is possible to understand the hydrant coverage in different areas and thus assess the level of public safety.

Service area and static pressure: Knowing the service area to which each hydrant belongs and the corresponding static pressure can help determine the water supply of the hydrant and assess its actual availability.

Proximity analysis: Combining the geographic location of fire hydrants with neighborhood information allows for an exploration of the relationship between hydrant density and service levels in different neighborhoods to identify possible public safety risks or imbalances.

Intersection Analysis: Understanding the relevance of hydrant locations to intersections allows you to assess the accessibility and ease of use of fire hydrants and guide road and traffic planning.

Spatial analysis: Spatial analysis techniques, such as heat maps or spatial interpolation, allow visualization and pattern recognition of fire hydrant distribution patterns and water pressures.

Data Acquisition (15%)

• Identify and obtain relevant datasets from online sources.

• Import the dataset into the Snowflake database, detailing the steps taken.

https://data.cincinnati-oh.gov/Thriving-Neighborhoods/Fire-Hydrants-Greater-Cincinnati-Water-Works-/qhw6-ujsg/about_data

This data set contains all fire hydrants owned, maintained, and operated by Greater Cincinnati Water Works (GCWW). This data set includes neighborhood; nearest address and intersection; service area; and static pressure. This data is geocoded for easy mapping and spatial analysis.

Description

Which neighborhoods have the highest number and density of fire hydrants?

The community with the highest number of fire hydrants is N/A (possibly an unknown or unmarked area), with 24,669 fire hydrants and the highest fire hydrant density.

Communities with a higher density of fire hydrants include Westwood, Clifton, Mt. Auburn, etc. These communities have a higher density of fire hydrants, possibly due to dense population or higher fire risk.

Which neighborhoods have the lowest number and density of fire hydrants?

Communities with the lowest number of fire hydrants include Villages at Roll Hill, English Woods, Millvale and others, which have fewer fire hydrants and lower fire hydrant density.

Differences in fire hydrant distribution between communities

There are significant differences in the number and density of fire hydrants among different communities, which may reflect differences in population density, building structure, fire risk and other factors in different communities.

Potential public safety risks

Communities with fewer or less dense fire hydrants may present a public safety risk, as an insufficient number of fire hydrants may make it difficult to extinguish fires and increase the likelihood of fire damage and injury or death.

Communities that need strengthening

Based on fire hydrant count and density data, communities can be identified that require enhanced fire hydrant construction and maintenance to improve public safety.

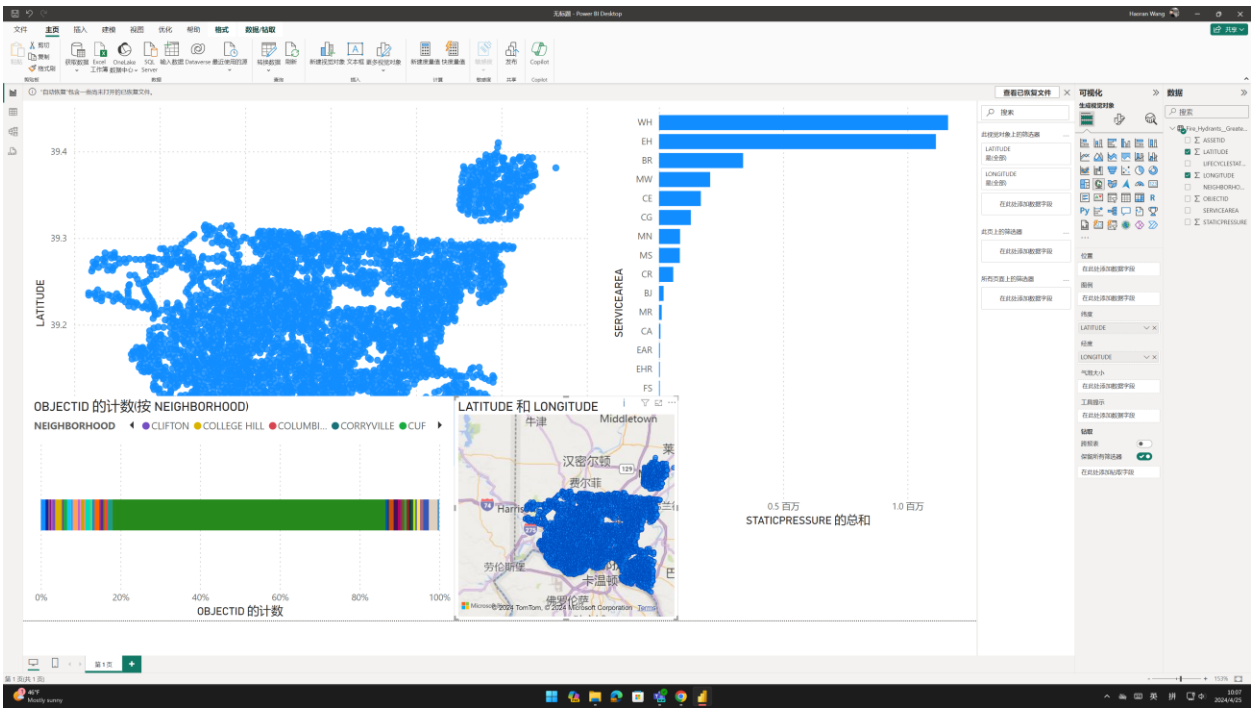
Which neighborhoods have the highest number and density of fire hydrants?

The community with the highest number of fire hydrants is N/A (possibly an unknown or unmarked area), with 24,669 fire hydrants and the highest fire hydrant density.

Communities with a higher density of fire hydrants include Westwood, Clifton, Mt. Auburn, etc. These communities have a higher density of fire hydrants, possibly due to dense population or higher fire risk.

Which neighborhoods have the lowest number and density of fire hydrants?

Commun



ities with the lowest number of fire hydrants include Villages at Roll Hill, English Woods, Millvale and others, which have fewer fire hydrants and lower fire hydrant density.

Differences in fire hydrant distribution between communities

There are significant differences in the number and density of fire hydrants among different communities, which may reflect differences in population density, building structure, fire risk and other factors in different communities.

Potential public safety risks

Communities with fewer or less dense fire hydrants may present a public safety risk, as an insufficient number of fire hydrants may make it difficult to extinguish fires and increase the likelihood of fire damage and injury or death.

Communities that need strengthening

Based on fire hydrant count and density data, communities can be identified that require enhanced fire hydrant construction and maintenance to improve public safety.

-