Exercise: Translate Questions into Tasks

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"What are the most dangerous spots in NYC"?

- Proxy Tasks : 1. Dangerous Spots can be defined by accidents (collisions) taking place in that specific area.
2. "Accidents" is ambiguous. It can be number of accidents, type of accidents (fatal or minor injuries)
3. Geographical conditions of the area. An area can be at high risk of accident because it has rough mountains, prone to landslides etc. Effect of spatial correlation and spatial components can also be responsible for accidents.
- Proxy Values : 1. Type of accidents can be computed using Fatalities and Injuries.
2. Number of accidents can be computed by date and time attribute. There must be some record existing for date and time which can show us how many accidents occured in that area.
3. Longitude and latitude can be used to determine the geography of area.

"Does the weather have an effect on collisions"?

- Proxy Tasks : What is the visibility distance due to the effect of weather. Visibility distance can be one of the main cause for collisions.
- Proxy Values : Precipitation, Wind Speed and Temperature. These values can determine visibility distance.

"How can we improve the situation"?

- Proxy Tasks : 1. To improve the situation we can identify the main cause for the collisions.
2. If the main cause for collisions comes out to be traffic rules violation, then situation can be improved by enforcing strict traffic rules.
- Proxy Values : Main cause. Main cause can have the following values - Traffic control disregarded, driver inattention/distraction, failure to yield right-of-way, alcohol involvement, backing unsafely, unsafe speed.