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Dr. Liu Hua

GEOG 462

Assignment 5

Question 1: What conclusions could you draw from the map? How could someone use the map to plan his/her trip in the area?

From the Uber travel time map, one can determine which areas are accessible within specific timeframes. It can help users or planners understand commuting time and find the best routes or plan trips to avoid congestion

Question 2: What is the percentage of the population living within 1km of a metro station? Hint: You may use the formular: (population within 1km of metro divides population in the city) * 100.

(4.23917/9.94772)*100= 42.6 %

Question 3: What is the spatial distribution of park areas in the city, e.g., larger park areas are observed in a certain part of the city? Do you observe any large park areas closer to the metro stations? Any large park areas far away from the metro stations?

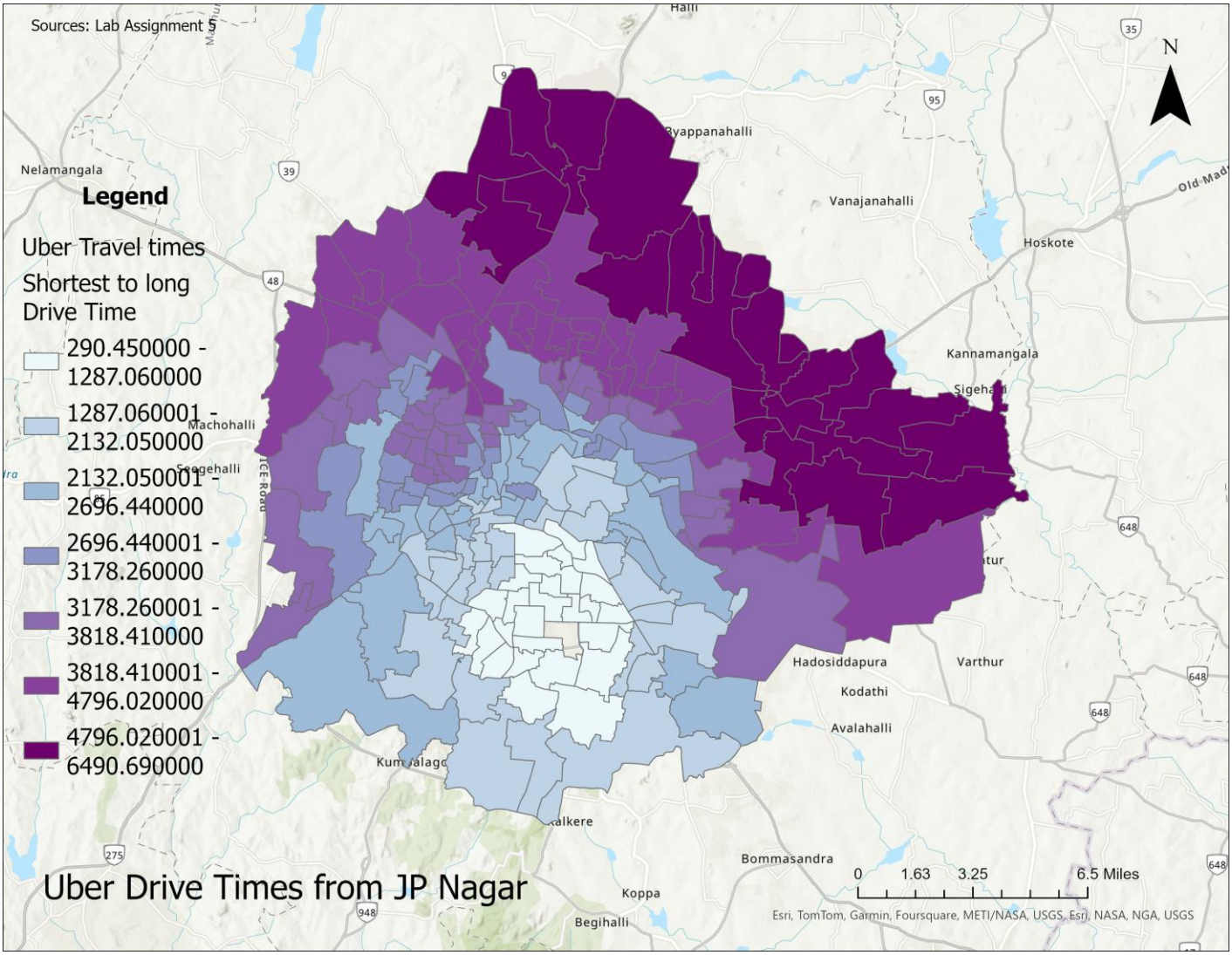
The spatial distribution of parks typically shows larger parks in specific regions of the city. Analyzing proximity to metro stations reveals whether these green spaces are easily accessible via public transit, important for environmental planning. There are large parks located both close and far from metro stations and are evenly distributed.

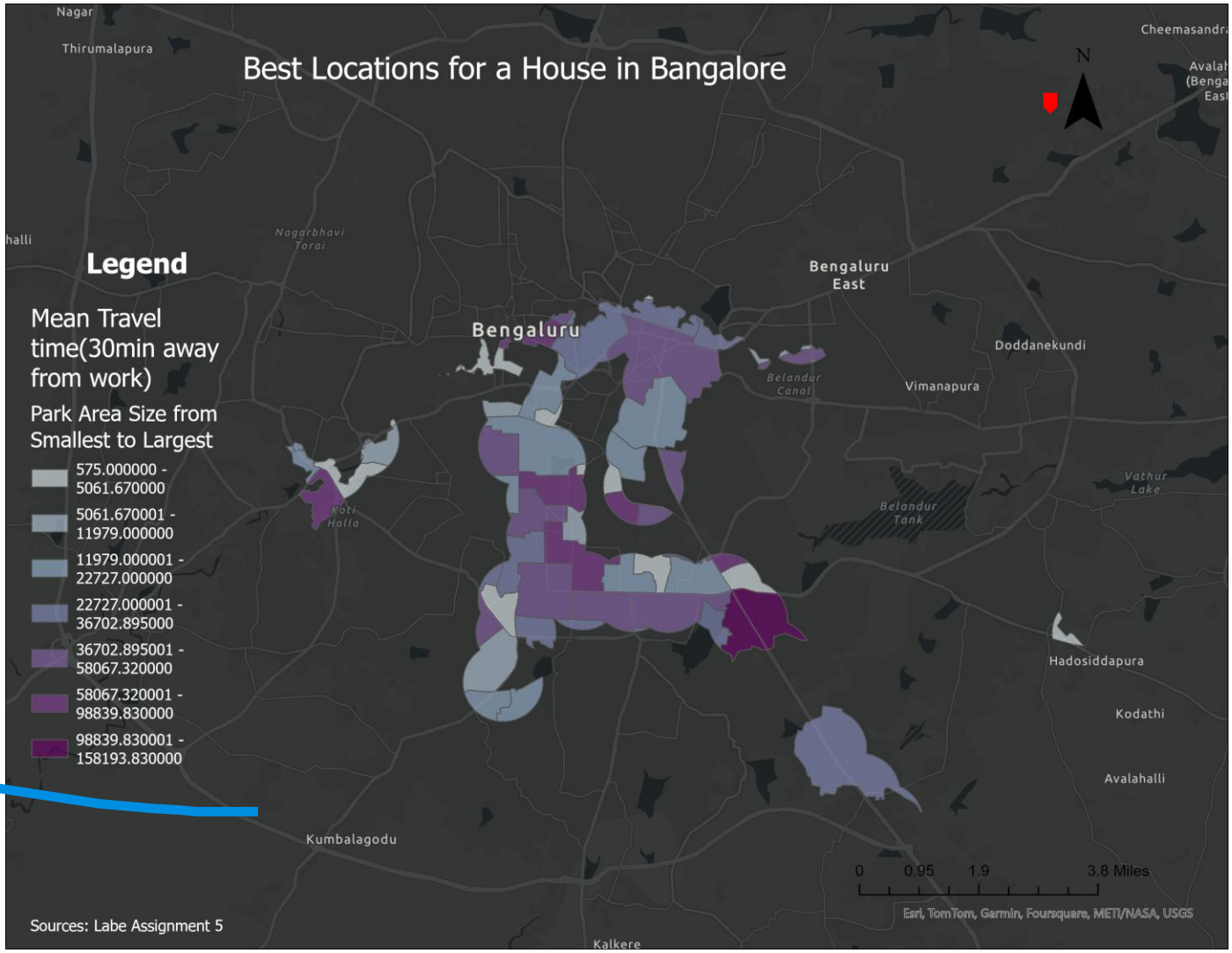
Question 4: How are your best home locations spatially distributed in the City of Bangalore?

The best home locations are distributed based on a balance between commute time, access to metro stations, and park accessibility. The overlay analysis indicates zones where these criteria align. The locations themselves are randomly distributed.

Question 5: Please use at least one page (double-spaced) to summary how spatial big data analysis is applied in the study.

Spatial big data analysis allows us to merge large, varied datasets to create comprehensive suitability models. In this study, we used traffic data, metro station locations, and park distribution to assess urban livability. The integration of these datasets shows how we can tailor urban planning based on criteria like commute time, transit proximity, and recreational access. Big data tools such as ArcGIS Pro empower city planners and researchers to make data-driven decisions, optimize infrastructure, and improve residents' quality of life.


Sources: Lab Assignment 5
N
Legend
Uber Travel times
Shortest to long
Drive Time
290.450000 - 1287.060000
1287.060001 - 2132.050000
2132.050001 - 2696.440000
2696.440001 - 3178.260000
3178.260001 - 3818.410000
3818.410001 - 4796.020000
4796.020001 - 6490.690000
Nelamangala
Byappanahalli
Vanajanahalli
Hoskote
Kannamangala
Machohalli
Hadosiddapura
Varthur
Kodathi
Avalahalli
Bommasandra
Koppa
Begihalli
0 1.63 3.25 6.5 Miles
Esri, TomTom, Garmin, Foursquare, METI/NASA, USGS, Esri, NASA, NGA, USGS
Uber Drive Times from JP Nagar


Best Locations for a House in Bangalore
N
Legend
Mean Travel time(30min away from work)
Park Area Size from Smallest to Largest
575.000000 - 5061.670000
5061.670001 - 11979.000000
11979.000001 - 22727.000000
22727.000001 - 36702.895000
36702.895001 - 58067.320000
58067.320001 - 98839.830000
98839.830001 - 158193.830000
Nagar
Thirumalapura
Nagarbhavi Torai
Bengaluru East
Bengaluru
Belandur Canol
Doddanekundi
Vimanapura
Koti Halla
Belandur Tank
Vathur Lake
Hadosiddapura
Kodathi
Avalahalli
Kumbalagodu
Kalkere
0 0.95 1.9 3.8 Miles
Sources: Labe Assignment 5
Esri, TomTom, Garmin, Foursquare, METI/NASA, USGS