



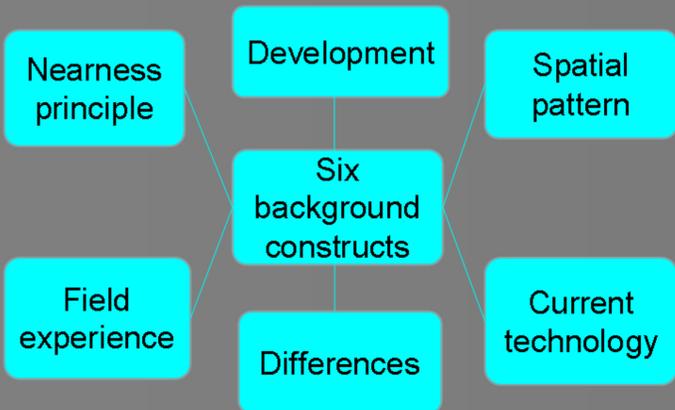
Incorporating illegal immigration of Florida into LandScan by County

Geography is essential to research studies in that it deals with not only knowledge on planet Earth, but also with the physical, social, and logical aspects of Earth as well. The Geographic Information System (GIS) is a tools system that helps understand and organize geographic data that is easy to view with interactive maps. The six background constructs of the spatial approach to GIS and geography helps the GIS provide the best and quickest way to analyze geographic data. LandScan USA incorporates both geographic knowledge and GIS to improve convenient spatial estimates of population statistics in many U.S. locations. LandScan USA is a high-resolution population distribution database that is used to gain spatial detailed data (age, gender, race) of the daytime population as well as the nighttime population of all locations of the U.S. to help homeland security deal with unexpected disasters, recognizing effects on populations, and to just having an advantage overall. The research aims to gain the spatial data and enhance LandScan accuracy with estimated daytime and nighttime populations. Unfortunately, one area of detail LandScan does not have is accurate information on the immigrants currently living in the U.S., especially the illegal immigrant population. The objective is to incorporate immigrant information for LandScan by researching data on legal and illegal immigrants in the United States, beginning with the state of Florida.

Research Objectives

- Add data to make LandScan USA as accurate and precise as possible
- Estimate illegal immigration Florida county population

Background



Methods

- Search data on illegal immigrants map data using GeoCommons
- Estimate number of immigrants by county
- Estimation equation
 - $\text{County share} = \frac{\text{county Hispanic}}{\text{total Hispanic population}}$
 - $\text{County illegal immigrant} = \text{county share} \times \text{state illegal immigrants}$

Results

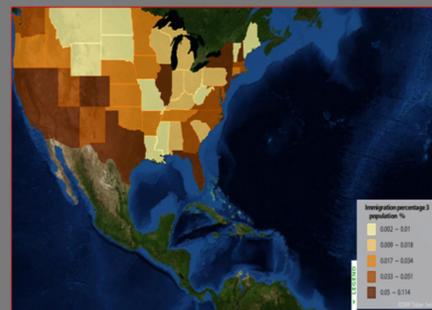


Figure 1. GeoCommons map displaying the foreign-born population of the U.S. population map.

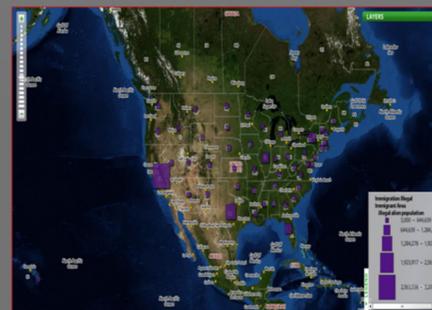


Figure 2. GeoCommons map displaying the illegal immigrants of the U.S.



Figure 3. GeoCommons map displaying the illegal immigrants percentages of the U.S.

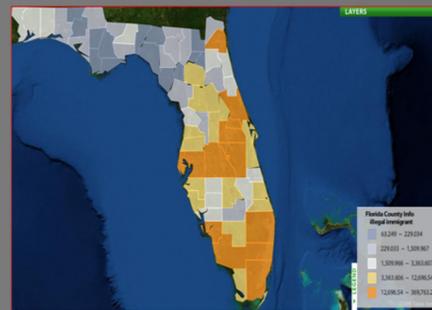


Figure 4. GeoCommons map displaying the Florida illegal immigration population.

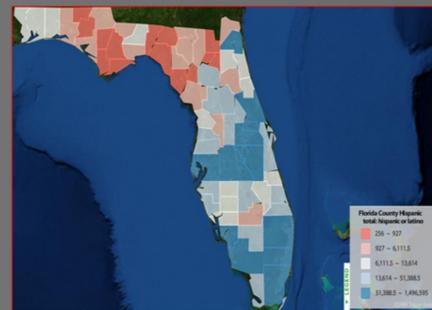


Figure 5. GeoCommons map displaying the Florida county Hispanic population.

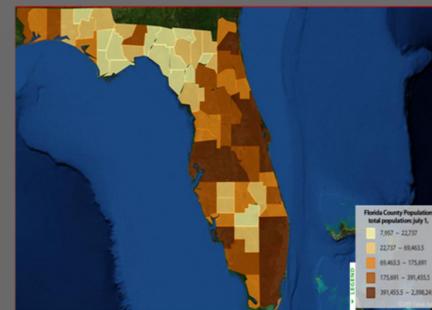


Figure 6. GeoCommons map displaying the Florida county population.

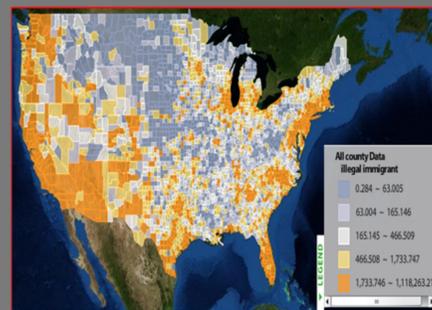


Figure 7. GeoCommons map displaying the U.S. county illegal immigrant data.

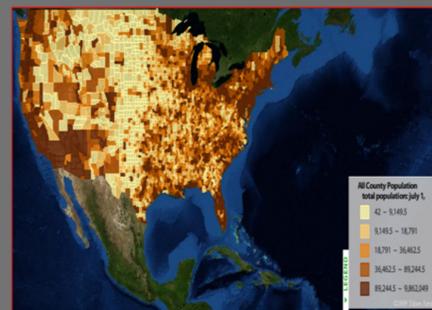


Figure 8. GeoCommons map displaying the U.S. county population.

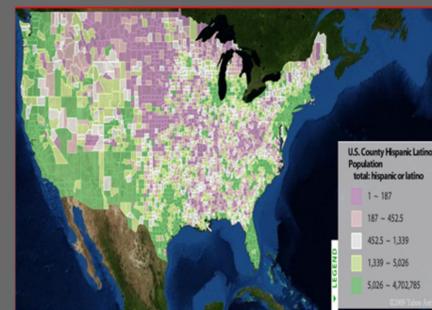


Figure 9. GeoCommons map displaying the U.S. county Hispanic population.

Conclusion

In conclusion, since the Florida legal immigrant population was not available for the original county share equation, the Hispanic county share equation was used to calculate the illegal immigration estimates. Based on the data, there were higher illegal immigrants in counties with high Hispanic population. There were also higher illegal immigrants in the southern counties of Florida than the northern counties. For the U.S. counties, there were higher illegal immigrants in counties with high Hispanic population than counties with low Hispanic populations.

Future Work

- Incorporate GeoCommons maps into LandScan USA
- Further obtain more accurate and concise data for illegal immigration estimates
- Update research data for current year

References
 U.S. Census Bureau
http://factfinder.census.gov/home/saff/main.html?_lang=en last accessed 8/9/2010
 Department of Homeland Security
<https://www.dhs.gov/files/immigration.shtm> last accessed 8/9/2010
 Federation For American Immigration Reform (FAIR)
<http://www.fairus.org/site/PageNavigator/facts/> last accessed 8/9/2010