My research project will be about identifying education deserts at the census tract level. In the paper “Education deserts: the continued significance of 'place' in the twenty-first century” Hillman mentions looking at the census tract level of education deserts might revel more deserts. This seems fun to do so I will try pursuing it (Hillman, 2016)

An education desert is an area where education opportunity is limited. Things that limit education opportunity can be finances, structural inequities, or place. How place effects education opportunity is that students may want/need to stay close to their home community. If their home community does not have universities nearby or few choices, then a student has few opportunities and that would be an education desert.

Defining an education desert is a place where there are zero colleges nearby or only one public broad access college. Broad access means that the college accepts most of their students. Majority is usually defined as 80% acceptance (Hillman, 2019). There are different ways to define local place. In the papers I have seen there are commuting zones which combine counties based on commuting patterns defined by the US Department of Agriculture and Core-Based Statistical Areas from the Census which do a similar task but centered on urban hubs. Since these areas are based on counties if I am interested at the tract level, I imagine I might need to use a distance-based metric.

Regarding identifying education deserts at the tract level, I believe it is important instead of having a binary outcome wither or not there is a desert but finding how much of a desert an area is. From what I have read a desert is defined by count data of colleges and the type of college. At the tract level this definition would not work. Since tracts are a lot more plentiful a lot more of them will not have a college in them. That is why I believe using distance would be better to identify education deserts at the tract level. Possible having a weighted distance measurement that considers the income level of the tract, cost of transportation, ethnicity, job market. To determine the weights of importance would require a dive into the theory seeing what important factors are to justify the weights. Mathematical it might be hard to condense this information into a type of score since I am not that experienced in doing that but as I am writing this it does sound cool and useful that I’m willing to learn.

Data required for this project:

* Census tract geographies (US Census) - The centroids are important for distance calculations.
* Economic Data – For example cost of transportation, income levels, types of jobs in the area.
* Demographic Data – Ethnicity possible other features
* School Data – locations of schools, acceptance rates, number of programs offered, cost of attendance, financial aid offered. I know some of this data is contained with the National Center for Education Statistics

Ultimately the goal would be to develop a function that produces an education desert score which would help shine light deeper in census tracts where there are high or low levels of education access.

Citations

Hillman, N 2019, *Place matters: a closer look at education deserts*, ACADEMIX series, no. 4, Third Way, [Washington], viewed 18 Mar 2021, <https://www.thirdway.org/report/place-matters-a-closer-look-at-education-deserts>.

Hillman, N, Wetchman, T 2016, *Education deserts: the continued significance of “place” in the twenty-first century*, Center for Policy Research and Strategy, American Council on Education, Washington, viewed 18 Mar 2021, <http://www.acenet.edu/news-room/Pages/CPRS-Viewpoints-Education-Deserts.aspx>.