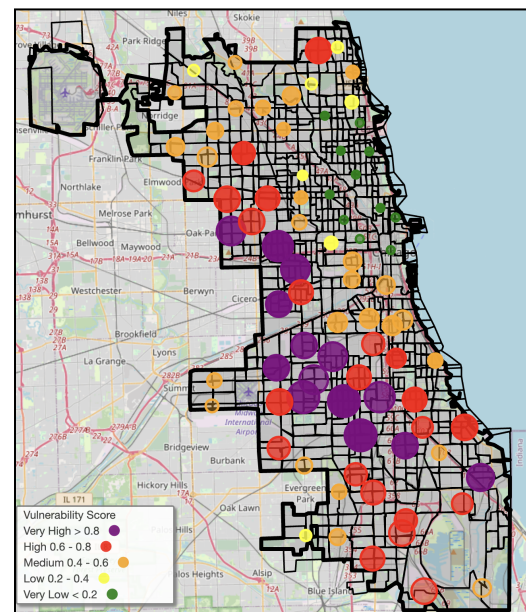
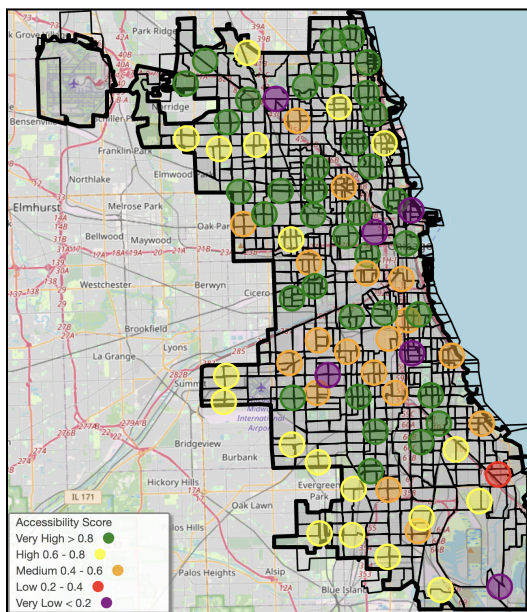


Chicago Public Library (CPL)

The Chicago Public Library group aimed to explore how the presence of different resources and facilities impacted the usage of a library branch. This was investigated by looking at (1) the correlation between branch usage and various features, (2) how public transit options impacted patrons' choice of branch, and (3) how the accessibility of a branch and the vulnerability of its surrounding population was defined and quantified.

After collecting a comprehensive list of public transit routes and branch features such as the presence of a parking lot, regression analysis revealed that individual branch accessibility was largely uncorrelated with the number of visitors or “travelers” (patrons who visit a library that doesn’t match their expected home branch).

Keeping these features in mind, two novel metrics were created: an Accessibility Index (AI) and a Vulnerability Index (VI), which acted as aggregate measures for broader comparisons. The AI presented the ease of access to a library, factoring in both mass and individual transit, and the VI used 2020 Census data and factors such as education levels and household income to gauge the vulnerability of a library’s surrounding neighborhoods. These indices were instrumental in identifying branches with critical needs in accessibility improvement and those serving vulnerable populations. The visuals below show the distribution of both indices across the various branches.



The resultant outputs emphasized the need for strategic planning that considers diverse factors. The AI and VI allowed the identification of branches needing better transit access and those serving socio-economically challenged communities, which would steer the CPL towards more equitable and impactful service delivery – for example, creating new bus stops or expanding community programs in at-risk areas.