ENGINEERING

Automated Data Processing: Making Community Indicators Possible for Lafayette, Indiana

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City planners have utilized community indicators for more than 100 years to measure the interdependence of social, environmental, and economic inputs that influence a community's well-being. Our research group is creating a tool for the City of Lafayette to automate the process of collecting data to develop community indicators and displaying those results for select neighborhoods in Lafayette.

The Ware Research Group previously completed multiple studies that provide the framework for our automation project. One study compiled the property conditions of

the Lincoln neighborhood in Lafayette. Another study investigated the current state of evictions in Lafayette. A third study analyzed factors related to resident retention in the northern neighborhoods of Lafayette. We are automating the data analysis process associated with these studies to provide data to the City of Lafayette to inform decisions on neighborhood revitalization, affordable housing, and homelessness intervention.

The data for this automation process will come from secondary data sources, such as the Census and Polk Directory, and will incorporate primary data analysis that will come from manually collected property conditions surveys. We will utilize Python and a SQL database to produce quarterly updates of our results accessible through a website we create on behalf of the City of Lafayette. We will mitigate the currently more labor-intensive reality of defining potential neighborhood initiatives by creating an automated system resulting in Lafayette receiving up-to-date data and analysis that will assist the city in

The City of Lafayette neighborhoods' custom signage.

formulating optimal decisions about existing and future economic and community development initiatives.

Research advisor Jason Ware writes: “The community engagement work this team is doing is critical for at least two reasons. First, it is establishing an efficient way to analyze disparate data types to help create community indicators for the City of Lafayette. Second, it is making the university-city partnership sustainable—a necessity for meaningful impact.”

*Attribution: The City of Lafayette Economic Development Department.