

ABSTRACT

Political campaigns are inherently geography-driven. The creation of a tool that allows a non-GIS (geographic information systems) professional to quickly and easily display the various spatial data concerning voters and their locations is key to winning elections. A political non-profit organization headquartered in Washington, D.C., has expressed an interest in a web-based mapping application that aids in voter targeting, especially the targeting of registered voters with irregular voting habits in order to persuade them to vote on Election Day. This thesis presents a web-based application, which provides campaigns and organizations with fast access to the knowledge they need to manage field operations. This project relies on open source software, including Leaflet, PostGIS, and GeoServer. The project focuses on Wake County in North Carolina, with the expectation of expanding the web application to the state level in the future. The data needed for the project are readily available and include publicly available voter files of all registered voters, and shapefiles of Wake County media markets, precincts, polling places, state House and Senate districts, Congressional districts, School Board districts, County Commissioner districts, and Superior Court districts. The evaluation shows that campaign staffers can use the web application to efficiently and effectively visualize relevant combinations of the above data and share this knowledge with their colleagues.