Open Tucson$_{\beta}$

An open-source visualization of local & federal datasets

Project Summary

Open Tucson was developed in response to the City SDK Challenge from Code for America's Hack For Change initiative. Our goal is to develop an open source web application to allow for local leaders, agencies, and citizens to cross examine data from federal, state, county, and city sources with ease. An example user story would be comparing the locations of farmer's markets with average household income, in order to illustrate where potential food deserts reside in the Tucson metro area.

This project is currently led by Andrew Slattery (@aslattery), with previous leadership by Corey Bishop (@bishoco), and is licensed under the MIT license. Visit our GitHub for more information on how to contribute to Open Tucson, and to stay updated on it's development.

Our Objectives

As a metropolitian area with a population of nearly 1 million[1], Tucson has an underdeveloped presence in terms of accessing open government data available to both it's leadership and citizens. Our objective with Open Tucson is to bridge this technological and knowledge divide, by creating an accessible and responsive web based application to offer users the capability to easily and quickly visualize data from city, state, and federal resources.

With regards to federal resources and datasets, we were excited to work with the US Census Bureau's CitySDK API[2], as it offered a modular and extensible platform for pulling federal data in a usable format (JSON, GeoJSON), as opposed to struggling to find data sources from the various federal agencies on a case by case basis.

In terms of usability (and keeping simplicity of use in mind), we determined a WolframAlpha approach would be best, offering a simple search field where users could input comparative queries, such as "farmers markets and median incomes" and "health clinics and public transporation routes," allowing our platform to interpret these inputs, and then pull the necessary datasets for output as a map overlay.

Our Solution

For our demonstration at our local National Day of Civic Hacking (NDOCH) event, we demonstrated a static dataset comparing the location of farmer's markets from local data sources with average household income, split by census tracts for greater granularity in our visualization.

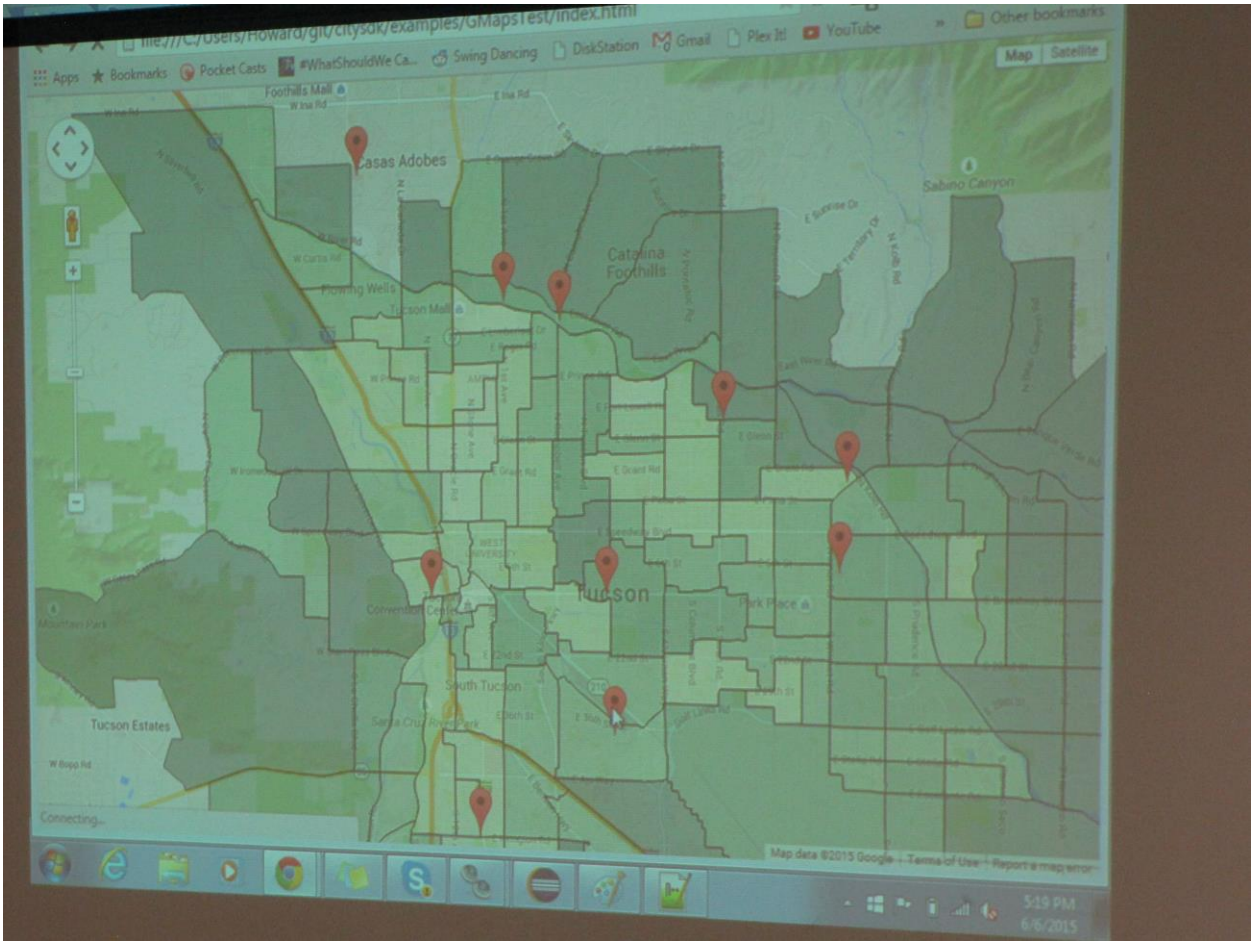

Figure 1: our visualization MVP presented at Code for Tucson's NDOCH event.

A demonstration of our webapp's basic mockup and MVP is available at https://open-dev.tucsonmade.org/.

Our next steps for this project include:

- Define a concise set of user stories for our public beta release
- Further integrate our implementation of the City SDK into our platform
- Explore additional local datasets to include in our offering, and reach out to local leadership to request additional open data sources for the Tucson metro area

After Action Review: Working with the City SDK

The City SDK was a pleasure to work with, as it was documented with clear to follow examples on potential use cases, and was offered in such a manner that other implementations of the API could be developed.

From a technical standpoint, we wanted to go beyond a client-side Javascript app and offer a platform for parsing queries into usuable visualizations utilizing a backend stack for caching and greater data extrapolation. As such, current project lead Andrew Slattery developed a PHP and NodeJS based wrapper for the CitySDK API endpoints for our MVP, allowing us to use the CitySDK on a backend stack.

Closing Remarks

Thank you for reviewing our value proposition summary, and for your interest in the development of Open Tucson. We hope to continue to refine our MVP and develop Open Tucson to be a publically usable application by 2016, and look forward to the continued development and support of the City SDK project at the federal level.

For questions, comments, and inquiries, please contact:

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