WiFi Heat Map with Mapbox

About Us:

LGS Innovations is a technology company delivering mission-critical communications products, R&D, and support services to U.S. defense, intelligence agencies and civilian organizations. We create advanced solutions in wireless communications, signals processing and analysis, optical networking, photonics, routing and switching, and spectrum management.

Project Goals and Requirements:

We are interested in finding innovative ways to visualize the RF environment around us as part of a larger communications solution.

Deliver a prototype to display wireless access point data on a heat map that provides filtering capabilities and includes import/export functionality. Students will:

- Define a file format for GPS and wireless access point data
- Develop a file parsing tool or web component to process the data file
- Create a simple web page to import/export data files, and display the data as a heat map over a geographic map
- Implement a corresponding data table that displays selected information from the heat map
- Add ability to filter what data points appear on the heat map
- Develop the application using Mapbox, and whatever other technology is desired

Suggested Team Size:

3-5 students

Skills/Experience:

Python, C++ or C# (select one)
JavaScript (Angular, Mapbox)