Data Visualization

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1. Introduction
   1. Scope
      1. The main purpose of this project is to create a live updating heatmap of user login locations, include subdirectories (condition, age, gender, etc)
      2. Will be used by both clients and businesses for different purposes (businesses want to see where people are using the app whereas users want to see where specific people are with similar age and condition)
      3. I plan on focusing on the user-front
   2. Definitions, acronyms, abbreviations

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| API | Application Programming Interface |
| ELK Stack | Elastic Search, Logstash, Kibana |
| IDE | Integrated Development Environment |
| Heatmap | Graphical representation indicating relative density of data on a map |

* 1. References
     1. Microsoft power bi forum
     2. Elastic website (for ELK stack documentation)
     3. Stackflow
  2. Overview
     1. This document will explore the broad picture of trying to get a live updating map of user logins in terms of different possible methods of accomplishing this as well as various possible use cases.

1. Overall Description
   1. This will provide MedVoice with the ability to track where the greatest number of users are located and therefore will allow the company to know where to focus marketing efforts.
      1. Business Interface
         1. Heatmapping to see where maximum number of users are located
      2. User Interface
         1. See where other users are located in order to meet up
      3. Software Interface
         1. Users will view the software on a mobile device
      4. Operations
         1. Will be going constantly, allowing it to update every time a new login is recorded in the database (or within a reasonable window)
2. Estimated Timeline
   1. 3 weeks – things to learn
      1. Need to finish with javascript, move on to JSON, and also learn node.js
      2. ELK
         1. Prior to trying to implement this, must learn how to use it, and its capabilities
      3. nodeSQL database
   2. 3 weeks – implementation
      1. Collaborate with team to prioritize use cases, necessities, and other possibilities
      2. Get ELK working to automatically refresh visuals by referencing master database as well as allow users to search in the database and find relevant results based on location, age, ailments, etc