SE4G Lab assignment: “Citizen Science Project Valorization App”

Hypothetical Customer:
The promoter of a Citizen Science project

Background and Customer Requirements:
Your customer has designed and promoted a public data collection campaign. Now that data has been collected, there is the need for presenting and analyzing this valuable information. The customer wants data being exposed on the Web so that everyone will be able to get insights into the collected data and their enabling applications.

Material and Assets:
The data collection campaign has been performed on the field by means of mobile devices using the Epicollect5 platform (https://five.epicollect.net). Collected data includes geographic coordinates, a series of quantitative and/or qualitative attributes, and possibly digital media information (e.g. pictures) for each entry. Raw data are openly distributed by means of a REST API.

Your Task:

A. You are requested to create (or identity and reuse) an Epicollect5 public project (https://five.epicollect.net/projects) including at least 50 entries having geographical coordinates and 2+ attributes.
B. You are requested to develop a Web app that offers the following features:
    - Retrieving the data using the Epicollect5 REST API.
    - Processing and exposing on the Web the data through the use of some original manipulation strategy, by leveraging both the geographic content (map-based views) as well as attributes (interactive exploratory graphs).
    - Allowing users to extract custom views of the data, leave comments, and eventually discover how to contribute to the data collection.

To support the development task, you are required to prepare the following documents:

1. A Requirement Analysis and Specification Document (RASD) for the described problem (deadline 4/15/2020).
2. A Design and Test Plan Document (DTPD) for the software system you will develop (deadline 5/3/2020).
3. A Software Release Document (SRD) describing the procedure for installing and running your software as well as any known limitation your software may show (deadline 6/3/2020).

Suggested software tools:
Epicollect5 REST API, Python-Flask, Python-Bokeh, Python data analysis and plotting libraries (on your choice)