Open Data Aggregation During a Pandemic

A framework for systematically collecting, cataloguing and updating open data during a pandemic. The case of Greece.

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Abstract

The COVID-19 pandemic, initiated in Greece during February 2020. It was a global crisis. There was no prior experience on how to deal with such a situation and the country's population was defenitely not prepared nor educated for such an emergency. As the pandemic evolved, the government started issuing measures to prevent the spreading of the pandemic and mitigate its risks like hospitalizations, intubations and deaths. This whole process was supported by measuring key metrics of the pandemic, like daily infections, hospitalizations, deaths, demographic data among others. This statistics were collected by the National Public Health Organization (EODY) of Greece and were publically available to the Greek citizens via a daily PDF report. Very soon, several initiatives by organizations and indivuduals occured trying to crunch these data provided by EODY and extract useful knowledge. Other initiatives resulted in informative dashboards that aimed to help the non experts (i.e. citizens) understand the progress of the pandemic, the spread of the infeaction to the general population and so forth. Most of these initiatives resulted in datasets and software that were licensed under open data or open source software licenses respectively. In this work we are suggesting a framework for aggregating the data of such initiatives and a process of curating the work of the open communities that emmerge in such global crisis. We hope that this work can help to get the most of the work of these volunteers, in future crises.

Keywords

Open Data, pandemic, COVID-19, Sars-cov-2, Data Aggregation, global crisis

Introduction

When the COVID-19 pandemic initiated in Greece [1] there was no prior experience similar situations and Greek citizens were defenitely not prepared nor educated for such an emergency. The National Public Health Organization (EODY) in coordination with the Greek government started collecting data [2] to monitor the evolution of the pandemic and at the same time started issueing measures for the containment of the spread in order to mitigate the risks of hospitalization, intubation and death due to COVID-19 infection.
COVID-19 reports by EODY were originally daily including several metrics related to "hard numbers" (i.e. hospitalizations, intubations, etc), demographical data and so forth. The daily report was publically available at through EODY's official website [2] in PDF format.

The Aggregation Framework

Sources Identification & Data Collection
Open Data Aggregation
Open Data Standardization
Open Data Maintenance
Open Data Assessment

Tables

Use \table and \tabledata for basic tables. See Table 1, for example.

Table 1. An example of a simple table with caption.

First name	Last Name	Grade
John	Doe	7.5
Richard	Miles	2

Figures

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Competing interests

All financial, personal, or professional competing interests for any of the authors that could be construed to unduly influence the content of the article must be disclosed and will be displayed alongside the article. If there are no relevant competing interests to declare, please add the following: 'No competing interests were disclosed'.

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Discussion
Threats to validity
Future work
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Please do not list grant funding in this section.

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