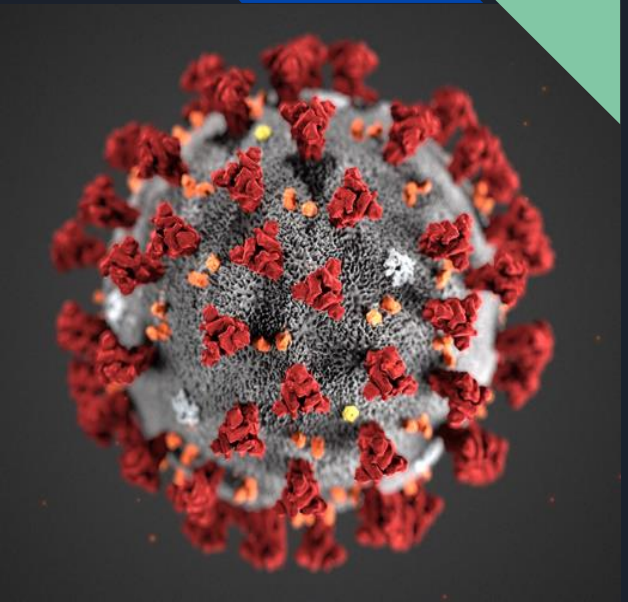


A Community Portal for Tracking COVID-19 Cases Worldwide.

A Project by: Ambas, Aragon, and Marasigan

03.23.2020

The Problem

COVID-19 is, first and foremost, a humanitarian challenge. COVID-19 has affected communities on multiple continents, with over 15,000 casualties out of over 350,000 reported cases.

To date, Wuhan and Hubei provinces have been the most affected locations. Thousands of health professionals are heroically battling the virus, putting their own lives at risk. Overstretched health systems mean that Wuhan and Hubei will need time and help to return to a semblance of normalcy.

In the Philippines, the cases of COVID-19 have risen to 462 in just a few weeks. Our government is making an enormous effort to stop the spread of the disease.

The need for a real-time tracking system will help minimize the spread by providing data that will increase the awareness of the public and authorities about the seriousness of this disease.

Our Challenge

We need close monitoring of virus cases to implement countermeasures to combat the increase of coronavirus infection worldwide.

We are creating a community portal that links to dashboards and web maps. These resources are powered with various datasets worldwide. With the help of the ArcGIS online tool, we can show interactive visualizations through interactive live maps and dashboards. These can be accessed and drilled down by users globally.

A dashboard that can provide near real-time visibility of the rate of increase or decrease of infections per country will enable authorities a proactive effort to control the spread.

The system should alert the public users for new cases in the country, increasing cases, and even declining cases of infection.

Understanding the problems

Unawareness of the exponential spread of the disease can pose a significant problem to the public and authorities. Lack of readily available information on the location and the numbers of infections affect not only the health of the people but also the broader implications on the economy, business, and employment.

Raising awareness on the location and extent of the spread of the disease through a technology platform encourages vulnerable people to take preventative and mitigating actions where possible infections occur.

We have to ensure that the knowledge from prediction and early warning systems can be accessed, understood, and acted upon by local communities.

Project objectives

Build a tracking tool for the stakeholders to have an understanding of the situation using the available data sources.

The project aims to answer the following questions:

1. How to quickly see the areas around the world that have increasing cases of coronavirus infections?
2. Which country needs immediate attention because of the constant and significant increase in cases of infections?
3. What is the status of COVID-19 infections in the country?
4. What is the current rate of infections in a specific location of interest?
5. What is the COVID-19 death rate in the country?

Target Audience

General Public - know how close, how far and how fast is the spread of infection cases.

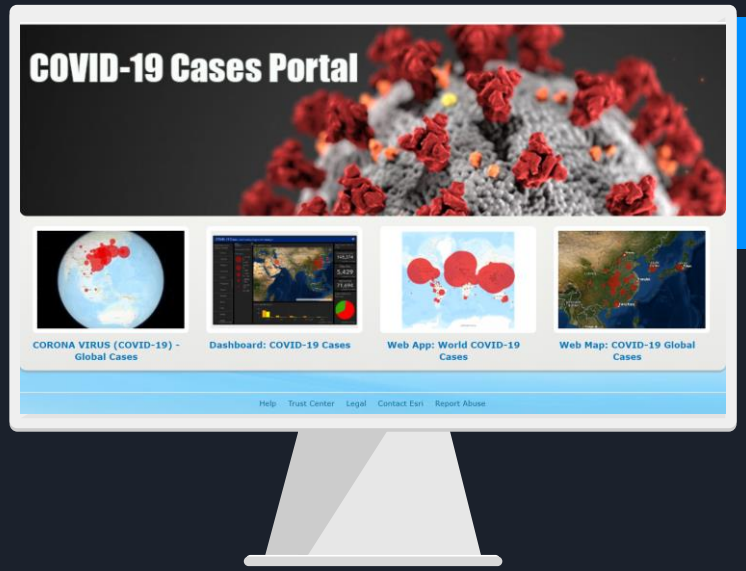
Health Authorities - help prepare in the mitigation plan and resources needed.

Government Authorities - give alerts to immediately implement preventive measures to eliminate or slow down the spread of the disease.

Introducing: The COVID-19 Portal

A community portal for the general public

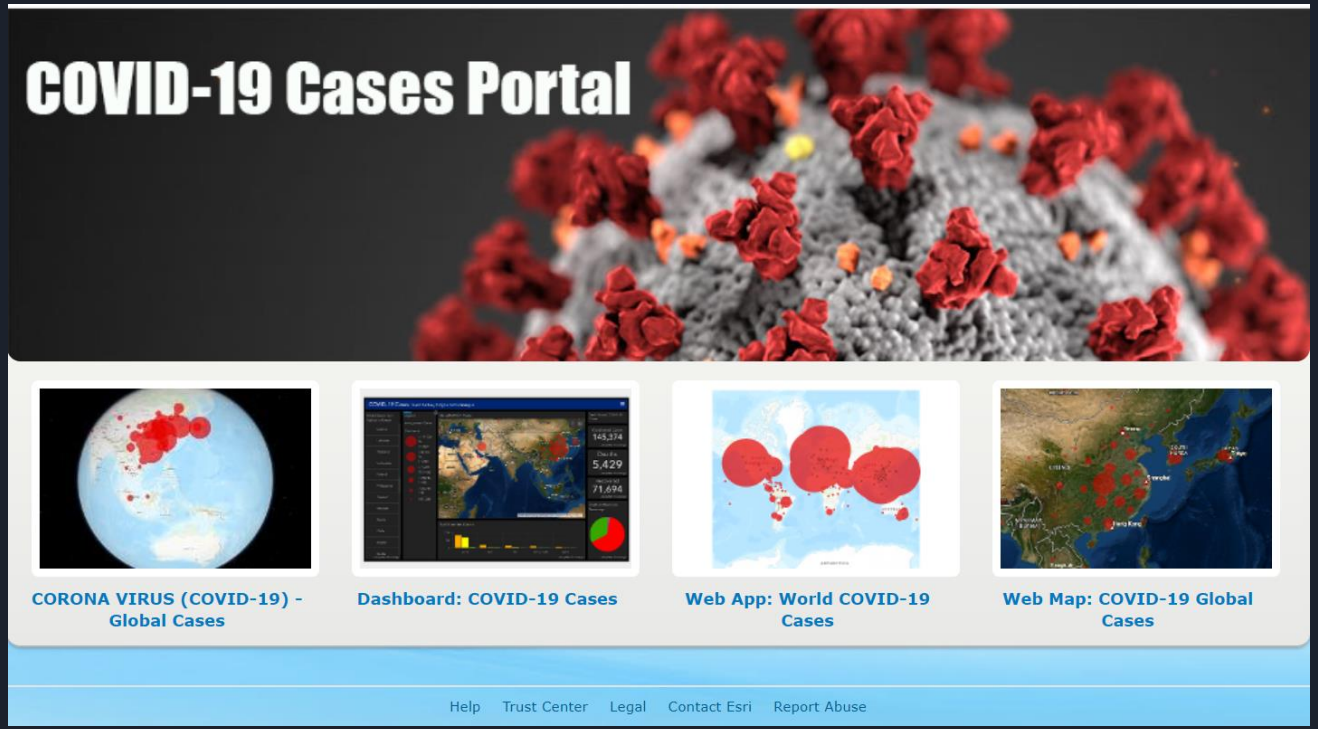
The portal houses interactive dashboards and web maps that are open to the public.



Link

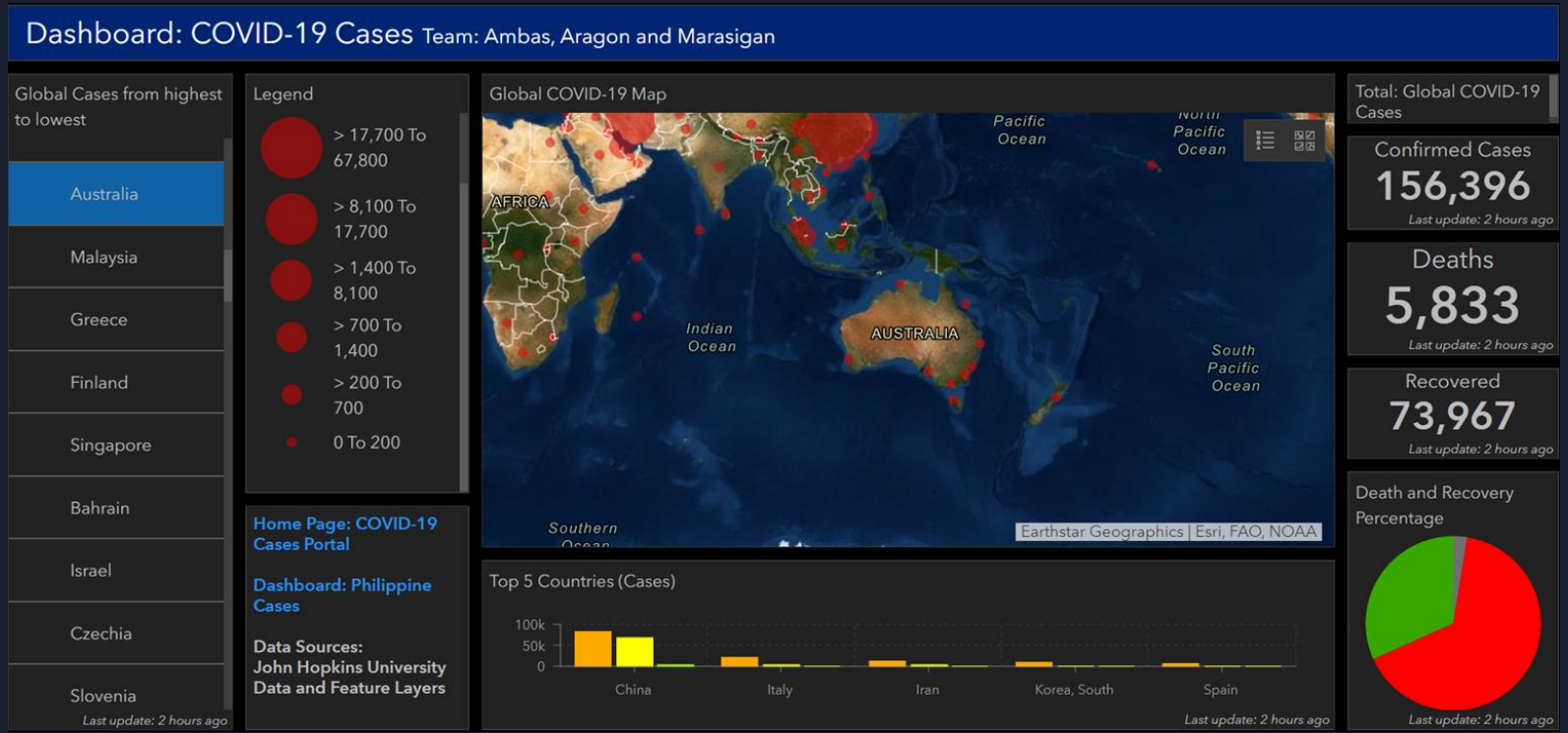
https://gisdatascience.maps.arcgis.com/

The COVID-19 Portal



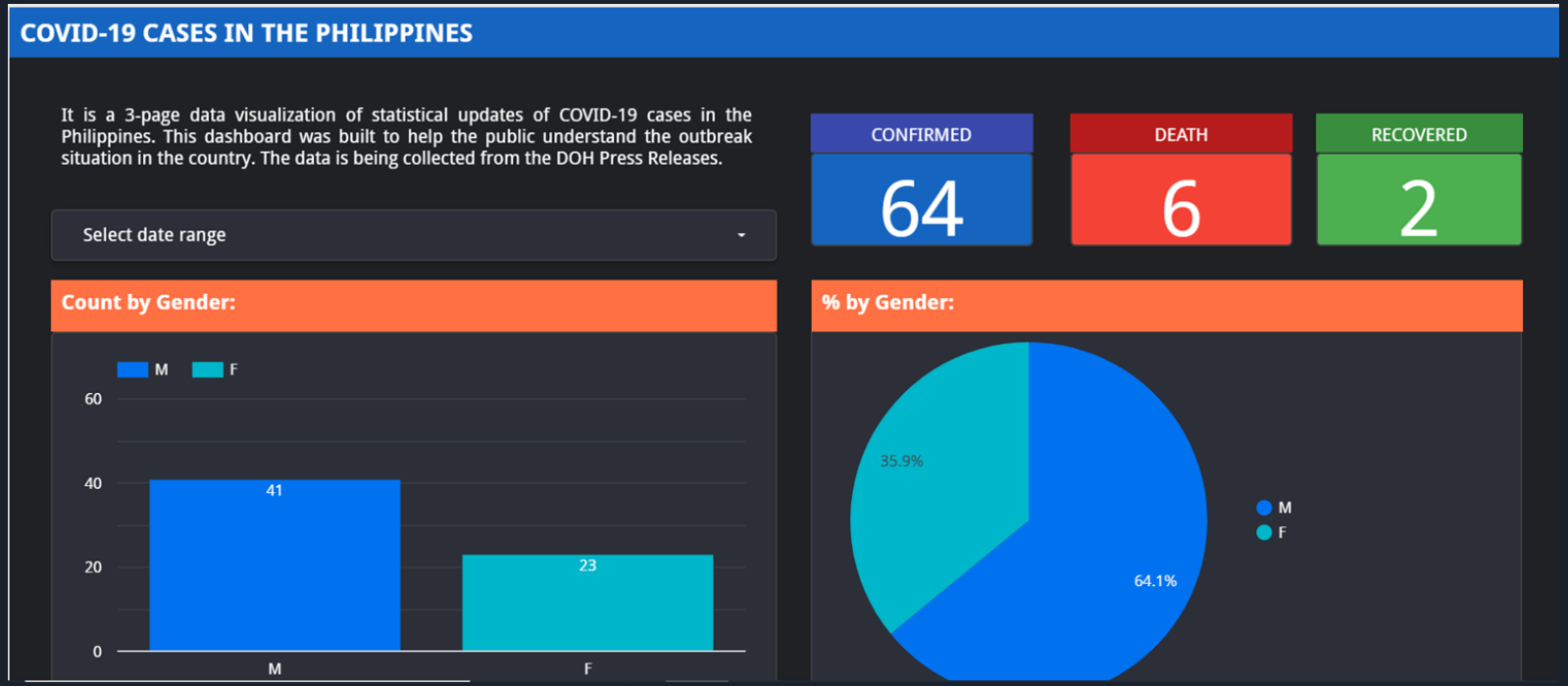
https://gisdatascience.maps.arcgis.com/home/index.html

The COVID-19 Dashboard



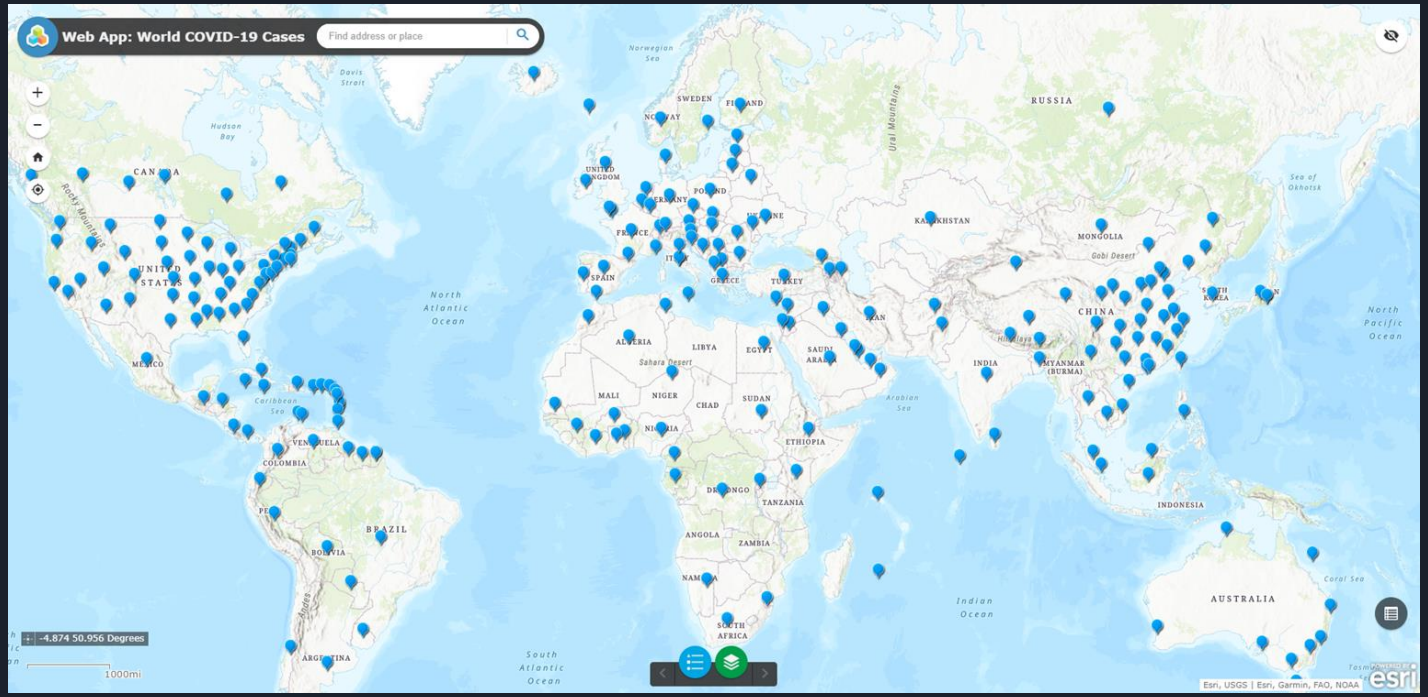
https://arcg.is/0jvCW8

The COVID-19 Dashboard for Local Cases



1. https://datastudio.google.com/u/0/reporting/1sfMyDu0OSGRbZUmEMbSpJg8KIz8bH6U6/page/HAYIB

Worldwide COVID-19 Cases Web Application



1. https://gisdatascience.maps.arcgis.com/apps/webappviewer/index.html?id=fe84cc1694aa4bea88de0cf57cd24fbb

Worldwide COVID-19 Cases Location (3D Web Scene)

https://gisdatascience.maps.arcgis.com/home/webscene/viewer.html?webscene=dcb7173c87044339b031fd6c3f3cff7b

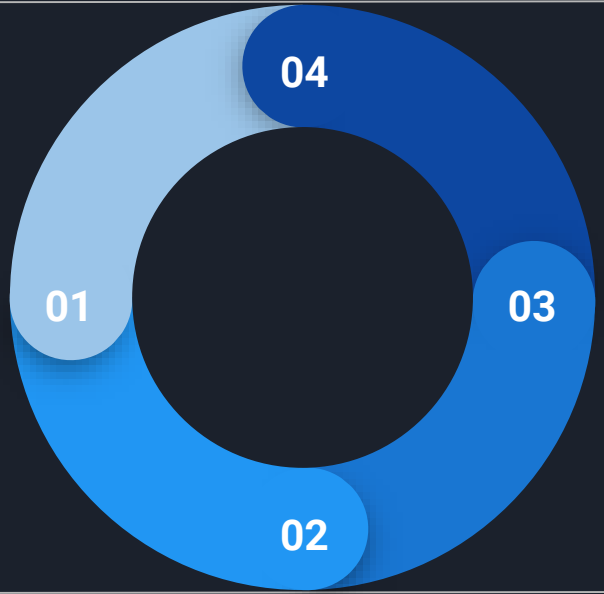
Cycle diagram

Prototype

Rapid Prototyping

Refine

Refine and Iterate



Share

Share to the public via the portal

Get feedback

Get feedback and add usable and new data

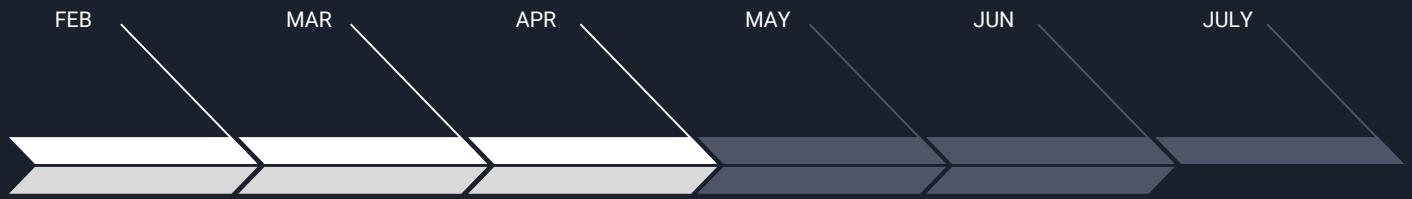
The portal and its apps can also run on mobile devices such as smartphones and tablets

Public Access.

Run Anywhere,

Any Device

Project timeline



Hackathon

Proposal

Final

Submission of Final Paper - including prototype

Future Work

Work on:

Predictive Analytics - Prediction of rate of increase (World and The Philippines)

Integrate the Prediction into the Web Maps and Dashboards

End of Phase 1

The Team

Jun Ambas

Dolskie Aragon

Randy Marasigan

Thank you and keep safe!