

# CovidDB Technical Report

## Motivation

It's no secret that we're still embroiled in the global COVID-19 pandemic. It is also no secret that every corner of the world is trying to gather and study data about infections both domestically and abroad. However, due to the large scale of both the crisis itself and the resulting influx of data it can be hard to sort through what's been happening for the last year and a half. Thus, our website will aggregate covid information by **country** and **city** to make it clear which areas have been hit the hardest at which times throughout the pandemic.

## User Stories

- Hey Development team, I am a middle school student who is responsible for delivering morning announcements over the intercom. The start of my announcement involves reading daily statistics for cases in our area. It would be awesome if the data could be updated at minimum, everyday. This way I can provide the most recent, accurate information to my classmates.
- Hey Development team, I am a mother of three so I am usually pretty busy throughout the day. I try my hardest to keep up with recent news and updates on COVID in order to keep my family as safe as possible. Sometimes, however, it's hard to keep up with so much; so, I was wondering if this website could contain a feature that displays major news regarding covid for example, new outbreaks in the area, government announcements, etc. This would be awesome because it would be a centralized location that can keep me informed and my family safe.
- Hey Development team, I am a pediatric doctor who hears from a lot of patients that they have trouble finding testing locations. As a result, I would think it would be amazing if there was a feature that showed nearby testing locations for users based on the address they search. Available and reachable testing is very important in beating this virus because we can take proper precautions for infected individuals.
- Hey Development team, I am a math teacher at my local high school. After seeing numbers all day, I think my students and I can both agree we don't enjoy seeing a list of statistics. I request a feature that visualizes the data, and can provide a better visualization of the severity of these stats. Whether this be through charts, graphs, etc, I think this feature would better deliver the goal of this website in informing the population about COVID data.
- Hey Development team, I am an elderly man who is a high risk individual. I think this website will be great for me to identify the general threat of my surrounding neighborhood. But, because I am older I have trouble navigating complicated websites. I would love it if there was a feature that could make it easy to generate a search for my address. This would help because it would be friendly for me to take advantage of the data you provide and stay safe.

## RESTful API

We designed our RESTful API using Postman: <API LINK>

Endpoints:

Country:

- All: <https://api.crown19db.me/v1/models/country/all>  
Fetch data about one all the countries in the database
- By ID: <https://api.crown19db.me/v1/models/country/id>  
Fetch data about one particular country, by ID

City:

- All: <https://api.crown19db.me/v1/models/city/all>  
Fetch data about all the cities in the database
- By ID: <https://api.crown19db.me/v1/models/country/all>  
Fetch data about one particular city, by ID

Covid:

- All: <https://api.crown19db.me/v1/models/country/all>  
Fetch data about the entire COVID timeline
- By ID: <https://api.crown19db.me/v1/models/country/all>  
Fetch data about one time step in the COVID timeline

## Models

Countries

- GDP
- Population
- Population Density
- Flag
- Area
- Capital

Cities

- Latitude
- Longitude
- Population
- Time Zone
- Country

Covid Timeline

- Deaths

- Recovered
- Cases
- Country with more recoveries than cases]
- Country with more deaths than cases

## **Tools**

React (Typescript) for Frontend

Postman for API design

Discord for team communication

React Bootstrap for CSS

## **Hosting**

After some initial troubles securing a domain name because of restriction of the phrase “covid”, we registered our domain “crown19db.me” through NameCheap and hooked it up to our React App using AWS Amplify. Once NameCheap and AWS were communicating we enabled SSL and now our app is just waiting for a back end and more data.