

The Crown Effect

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Problem Statement

The recent epidemic **coronavirus** creates **uncertainties** in the **global health community**, and it is **challenging** to **communicate potential risks** to the **general public** and **public health professionals**.

Project Goals



Create an interactive **user interface** and comprehensive **visualizations** to make information about coronavirus **easily digestible** for the general public



Predict potential **health risks** and **business risks** in the future and **support data-driven decision making** among professionals



Provide policy makers and health professionals with **reliable** information regarding the **future** spread of coronavirus and help them take **proactive** measures

Our Solution

The Crown Effect is an Open Source project that's driven by Python. We utilized **Facebook's** Open Source **Prophet** library to **predict future** coronavirus cases worldwide based on current trends and present the data to users in a simple, **map-based graphical interface**. Some of The Crown Effect's features and technical specifications:

- **Quick curve-fitting-based model** facilitated by Facebook's Prophet and powered by Stan, using GAMs and fitting via L-BFGS
- **Plot.ly's Open Source Graphing Library** to present predictions on the world map with interactive components for the user to use
- **Python-based backend** to automatically fetch the latest coronavirus spread data, generate predictions, and update visualizations via daily cron jobs
- **Data for The Crown Effect** provided courtesy of John Hopkins University's time series set



<https://crown-effect.herokuapp.com>

