A Vis Tool for BC CDC: Disease Outbreak Detection and Prediction

CPSC 547 Pitch
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Problem

• British Columbia Centre for Disease Control (BC CDC) currently monitors over 60 diseases, including COVID-19.

• It requires highly experienced staff to continuously monitor and decide whether a reported disease count is higher than expected for each of the 60+ diseases.

• This process is too costly and fallible.
Solution

• In collaboration with BC CDC and School of Population and Public Health, I developed an automated method for detecting disease outbreaks (my MSc thesis under the supervision of Prof. Matias Salibian-Barrera).

• **Goal 1:** To develop a vis tool for decision makers at BC CDC.

• **Goal 2:** To provide a prediction functionality using ML.
BC CDC data is not open to general public.

I will use open data from the US: Project Tycho.

The data type is a table. It has the following attributes:
- Time
- Geographical area (states)
- Disease count (mostly weekly)
- Disease type
- Derived attributes
Software/platform

- The method is implemented in R and C++.

- A prototype vis tool is made in ShinyApp; I am open to other tools.
Interested?

- I am looking for one partner.