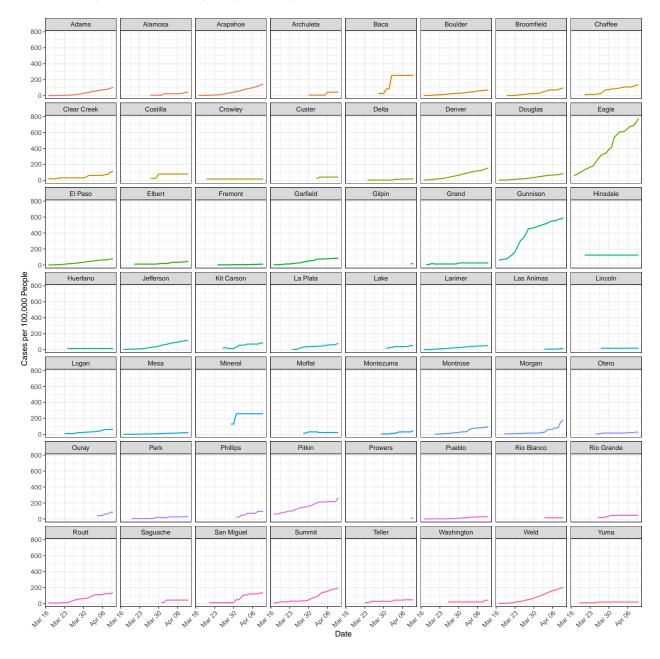
COVID-19 Confirmed Cases by Colorado County

Joseph Tuccillo, University of Colorado-Boulder Department of Geography
11 April, 2020

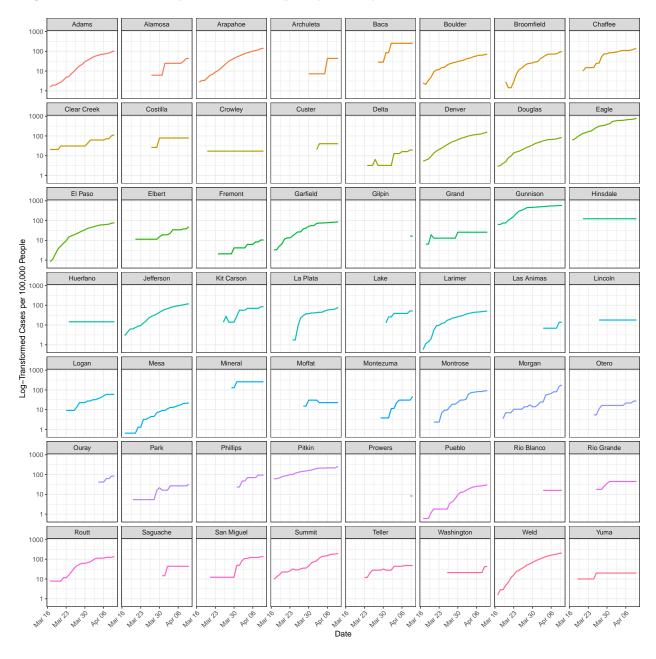
Daily Cases by Colorado County

```
## OGR data source with driver: GeoJSON
## Source: "https://opendata.arcgis.com/datasets/fbae539746324ca69ff34f086286845b_0.geojson", layer: "O
## with 64 features
## It has 23 fields
```

Raw Cases per 100,000 People by County



Log-Transformed Cases per 100,000 People by County



County Confirmed Case Trajectories (Experimental)

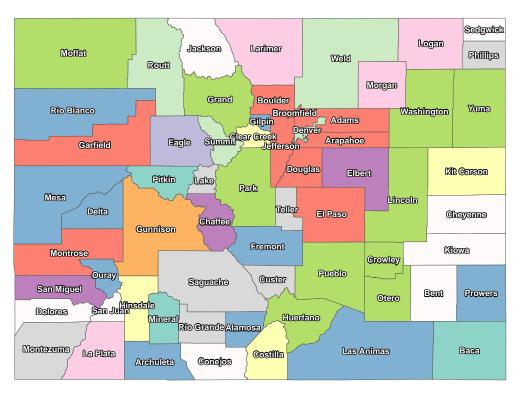
Methodology

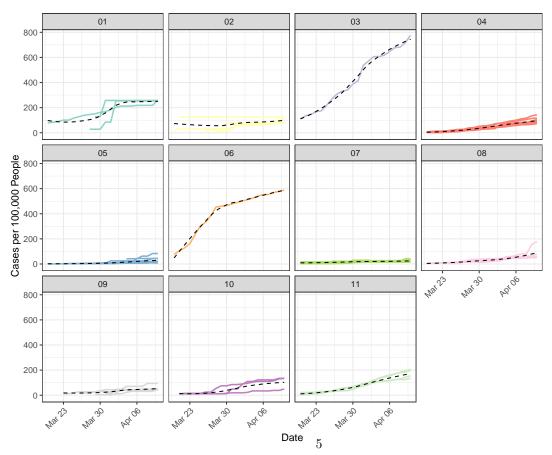
Use Affinity Propagation clustering to group daily reports of confirmed cases by county based on two criteria:

- 1. The current rate of confirmed cases per 100,000 people.
- 2. The change in confirmed cases per 100,000 people since the previous day.
- March 20, 2020 is used as the intial date, since it is the first day at which the change in cases/100k people by county can be measured (3/19/2020 marks) the first day in which all counties were reporting).
- From the ensemble of daily clusterings, measure the percentage of days to date that any two counties shared a cluster label.
- Perform a final clustering (also using Affinity Propagation) to group the change trajectories from 3/20/2020 to present.

Raw Cases per 100,000 people by cluster

Colorado COVID-19 Daily Confirmed Case Trajectories (2020-03-20 - 2020-04-10)





Log-transformed Cases per 100,000 people by cluster

Colorado COVID-19 Daily Confirmed Case Trajectories (2020-03-20 - 2020-04-10)

