

# COVID-19 Confirmed Cases by Colorado County

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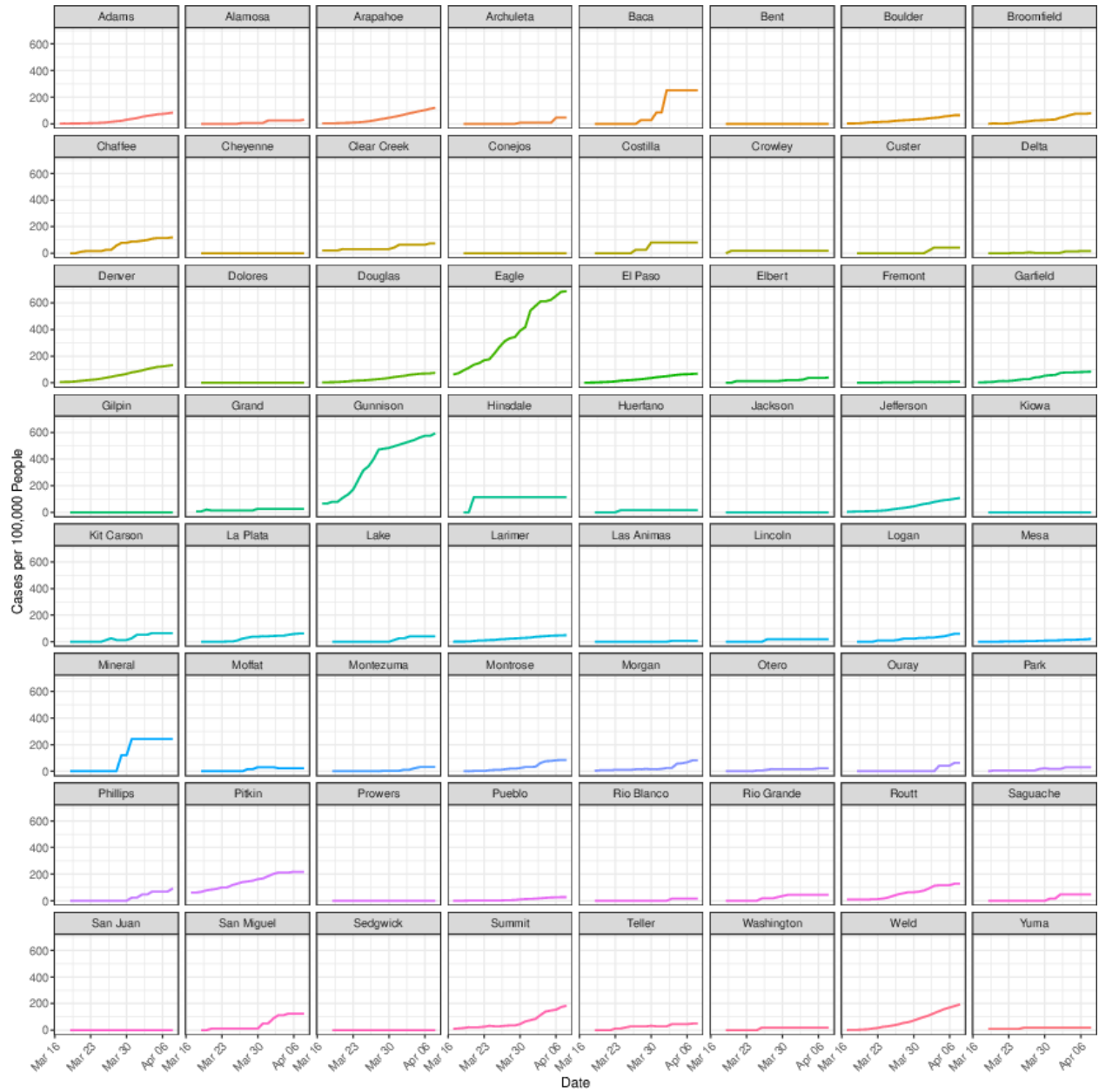
*09 April, 2020*

```
knitr::opts_chunk$set(fig.path='figs/',  
  fig.pos='h',  
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  message=FALSE)  
knitr::opts_knit$set(root.dir = '../')
```

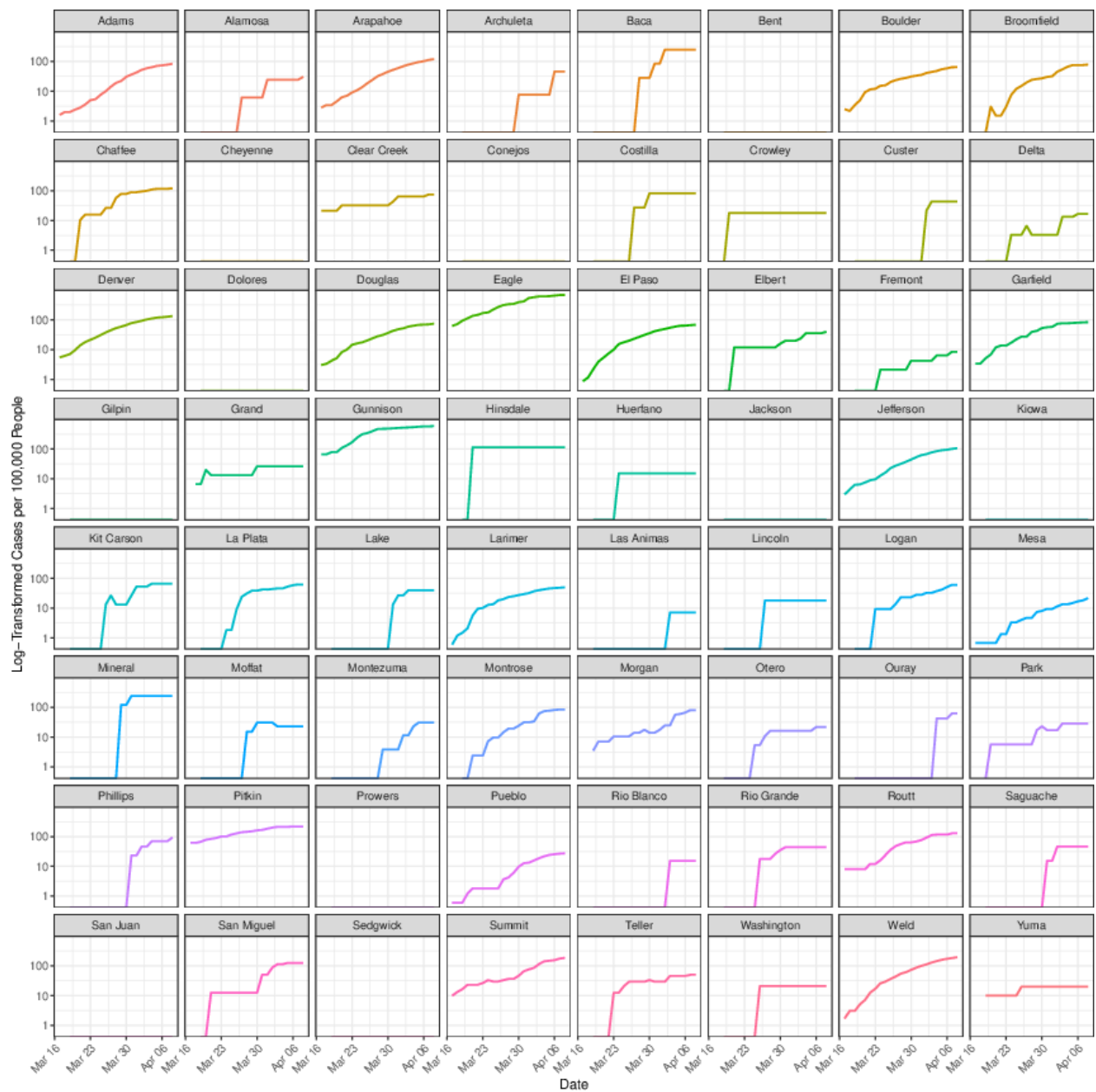
## Daily Cases by Colorado County

```
## Using an auto-discovered, cached token.  
## To suppress this message, modify your code or options to clearly consent to the use of a cached token  
## See gargle's "Non-interactive auth" vignette for more details:  
## https://gargle.r-lib.org/articles/non-interactive-auth.html  
## The googledrive package is using a cached token for jotu9073@colorado.edu.
```

## Raw Cases per 100,000 People by County



## Log-Transformed Cases per 100,000 People by County



## County Confirmed Case Trajectories (Experimental)

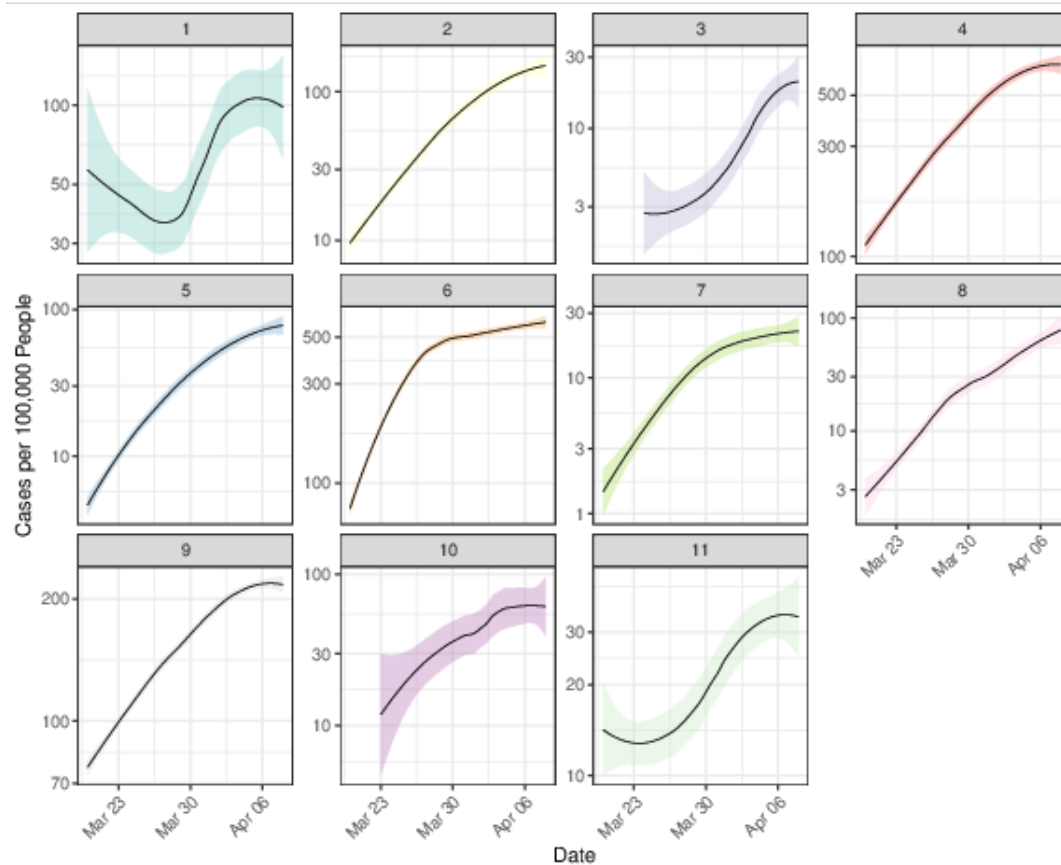
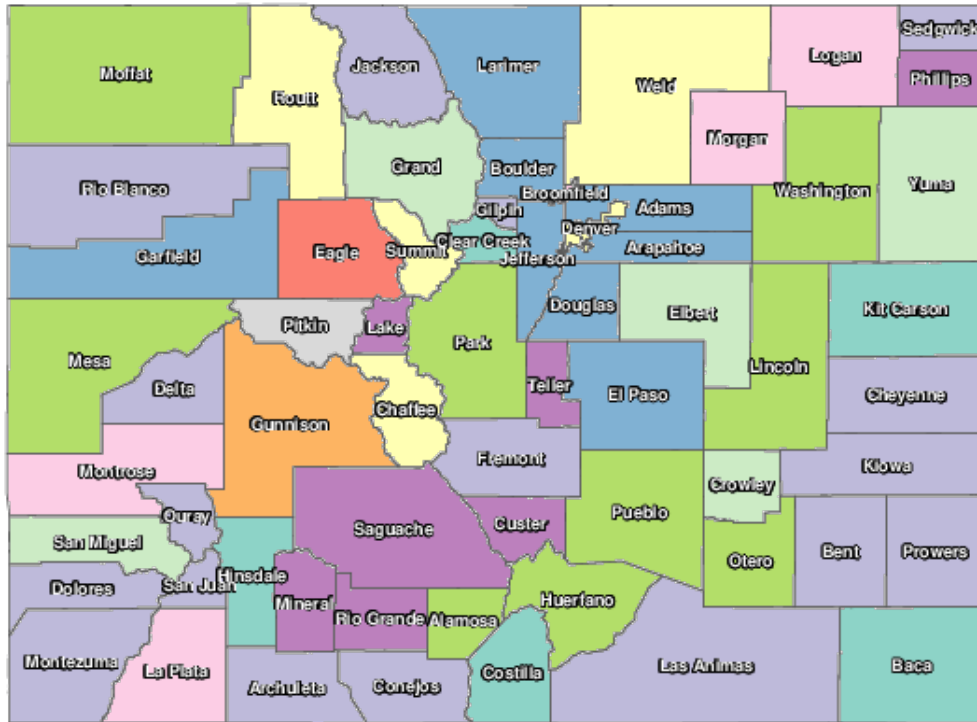
### Methodology

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 initial 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.

## Smoothed Raw Cases per 100,000 people by cluster with variable y-axes

Colorado COVID-19 Daily Confirmed Case Trajectories  
(2020-03-20 - 2020-04-08)



## Smoothed Log-transformed Cases per 100,000 people by cluster with fixed y-axes

Colorado COVID-19 Daily Confirmed Case Trajectories  
(2020-03-20 - 2020-04-08)

