

# Data summary of covid.rds

3/10/2020

The data begins from 1/24/2020 to 3/5/2020 with 42 days in total and 50 cities in total.

```
state = readRDS("data/covid.rds")
summary(state)
```

##	Length	Class	Mode
## Wuhan	9	data.frame	list
## Xiaogan	9	data.frame	list
## Huanggang	9	data.frame	list
## Jingzhou	9	data.frame	list
## Ezhou	9	data.frame	list
## Suizhou	9	data.frame	list
## Xiangyang	9	data.frame	list
## Huangshi	9	data.frame	list
## Yichang	9	data.frame	list
## Jingmen	9	data.frame	list
## Xianning	9	data.frame	list
## Shiyan	9	data.frame	list
## Xiantao	9	data.frame	list
## Enshi	8	data.frame	list
## Qianjiang	9	data.frame	list
## Beijing	9	data.frame	list
## Tianjin	9	data.frame	list
## Shanghai	9	data.frame	list
## Chongqing	9	data.frame	list
## Hefei	9	data.frame	list
## Bengbu	9	data.frame	list
## Fuyang	9	data.frame	list
## Bozhou	9	data.frame	list
## Fuzhou.f	9	data.frame	list
## Shenzhen	9	data.frame	list
## Guangzhou	9	data.frame	list
## Xinyang	9	data.frame	list
## Zhengzhou	9	data.frame	list
## Nanyang	9	data.frame	list
## Zhumadian	9	data.frame	list
## Qiqihar	9	data.frame	list
## Harbin	9	data.frame	list
## Changsha	9	data.frame	list
## Nanjing	9	data.frame	list
## Suzhou	9	data.frame	list
## Xuzhou	9	data.frame	list
## Nanchang	9	data.frame	list
## Xinyu	9	data.frame	list
## Shangrao	9	data.frame	list
## Jiujiang	9	data.frame	list

```
## Yichun      9      data.frame list
## Ganzhou     9      data.frame list
## Fuzhou.j    9      data.frame list
## Jinan       9      data.frame list
## Xi.an       9      data.frame list
## Chengdu     9      data.frame list
## Wenzhou     9      data.frame list
## Hangzhou    9      data.frame list
## Ningbo      9      data.frame list
## Taizhou     9      data.frame list
```

The data has nine variables. m19 is the travel intensity in 2020. m20 is the travel intensity in 2020, and ratio is m19 divided by m20.

```
str(state[['Wuhan']])
```

```
## 'data.frame':   42 obs. of  9 variables:
## $ dates      : Date, format: "2020-01-24" "2020-01-25" ...
## $ suspect    : num  1 1 1 1 1 ...
## $ infected   : num  4.54e-10 5.25e-10 5.67e-10 6.41e-10 1.46e-09 ...
## $ remove     : num  4.96e-11 6.43e-11 7.80e-11 9.64e-11 1.21e-10 ...
## $ action     : int  1 1 1 1 1 1 1 1 1 ...
## $ m19        : num  1.99 2.03 2 1.89 1.91 ...
## $ m20        : num  1.281 0.893 0.626 0.657 0.675 ...
## $ ratio      : num  1.55 2.27 3.2 2.88 2.84 ...
## $ gdp        : num  13.6 13.6 13.6 13.6 13.6 ...
```

```
state[['Wuhan']]
```

##	dates	suspect	infected	remove	action	m19	m20	ratio
## 1	2020-01-24	1.0000000	4.544244e-10	4.957358e-11	1	1.9864	1.2811	1.550543
## 2	2020-01-25	1.0000000	5.251127e-10	6.426204e-11	1	2.0310	0.8931	2.274101
## 3	2020-01-26	1.0000000	5.673420e-10	7.803248e-11	1	2.0023	0.6259	3.199073
## 4	2020-01-27	1.0000000	6.407844e-10	9.639306e-11	1	1.8940	0.6573	2.881485
## 5	2020-01-28	1.0000000	1.459666e-09	1.211799e-10	1	1.9139	0.6747	2.836668
## 6	2020-01-29	1.0000000	1.748846e-09	1.450486e-10	1	1.9893	0.6829	2.913018
## 7	2020-01-30	1.0000000	2.075664e-09	1.679993e-10	1	2.1716	0.6645	3.268021
## 8	2020-01-31	1.0000000	2.422679e-09	2.405236e-10	1	2.9441	0.6906	4.263105
## 9	2020-02-01	1.0000000	2.951464e-09	2.735727e-10	1	3.3213	0.6902	4.812083
## 10	2020-02-02	1.0000000	3.772182e-09	3.662936e-10	1	3.5623	0.6617	5.383558
## 11	2020-02-03	1.0000000	4.720506e-09	4.525884e-10	1	3.6567	0.6930	5.276623
## 12	2020-02-04	1.0000000	5.860698e-09	5.682601e-10	1	3.6400	0.6791	5.360035
## 13	2020-02-05	1.0000000	7.666462e-09	6.756695e-10	1	3.1617	0.6667	4.742313
## 14	2020-02-06	1.0000000	9.287701e-09	7.977674e-10	1	3.0862	0.6000	5.143667
## 15	2020-02-07	1.0000000	1.066566e-08	9.363898e-10	1	3.9827	0.6171	6.453897
## 16	2020-02-08	1.0000000	1.248795e-08	1.186094e-09	1	3.8194	0.6090	6.271593
## 17	2020-02-09	1.0000000	1.375391e-08	1.364191e-09	1	4.0143	0.6160	6.516721
## 18	2020-02-10	1.0000000	1.551653e-08	1.585436e-09	1	4.0514	0.6168	6.568418
## 19	2020-02-11	1.0000000	1.694131e-08	1.826878e-09	2	4.2747	0.6076	7.035385
## 20	2020-02-12	1.0000000	1.795481e-08	2.019664e-09	2	3.6909	0.5958	6.194864
## 21	2020-02-13	1.0000000	3.028945e-08	2.716448e-09	2	3.5353	0.6191	5.710386
## 22	2020-02-14	1.0000000	3.304079e-08	2.789891e-09	2	4.3351	0.6714	6.456807
## 23	2020-02-15	1.0000000	3.480616e-08	3.358151e-09	2	4.2806	0.5963	7.178601
## 24	2020-02-16	1.0000000	3.622727e-08	3.817165e-09	2	4.3835	0.5791	7.569504
## 25	2020-02-17	1.0000000	3.777874e-08	4.421229e-09	2	4.6221	0.5928	7.797065
## 26	2020-02-18	1.0000000	3.924758e-08	5.172176e-09	2	4.6993	0.5785	8.123250

##	27	2020-02-19	1.0000000	4.077151e-08	6.001157e-09	2	3.9236	0.5739	6.836731
##	28	2020-02-20	1.0000000	4.133610e-08	6.594204e-09	2	3.8279	0.5907	6.480278
##	29	2020-02-21	1.0000000	4.162895e-08	7.312102e-09	2	4.4992	0.5968	7.538874
##	30	2020-02-22	0.9999999	4.191721e-08	8.322853e-09	2	4.5464	0.5687	7.994373
##	31	2020-02-23	0.9999999	4.241387e-08	9.221603e-09	2	4.4996	0.5693	7.903741
##	32	2020-02-24	0.9999999	4.278659e-08	1.004049e-08	2	4.5051	0.6197	7.269808
##	33	2020-02-25	0.9999999	4.321255e-08	1.139366e-08	2	4.7287	0.6107	7.743082
##	34	2020-02-26	0.9999999	4.355222e-08	1.277070e-08	2	4.0333	0.6198	6.507422
##	35	2020-02-27	0.9999999	4.390383e-08	1.429922e-08	2	3.9043	0.6085	6.416270
##	36	2020-02-28	0.9999999	4.419117e-08	1.648597e-08	0	4.5879	0.6130	7.484339
##	37	2020-02-29	0.9999999	4.457674e-08	1.818157e-08	0	4.6274	0.6184	7.482859
##	38	2020-03-01	0.9999999	4.509543e-08	1.998641e-08	0	4.6469	0.6157	7.547344
##	39	2020-03-02	0.9999999	4.527261e-08	2.164346e-08	0	4.5595	0.6540	6.971713
##	40	2020-03-03	0.9999999	4.537451e-08	2.324450e-08	0	4.8362	0.6523	7.414073
##	41	2020-03-04	0.9999999	4.547917e-08	2.494469e-08	0	4.1974	0.6699	6.265711
##	42	2020-03-05	0.9999999	4.559943e-08	2.636580e-08	0	3.8384	0.6743	5.692422
##		gdp							
##	1		13.63025						
##	2		13.63025						
##	3		13.63025						
##	4		13.63025						
##	5		13.63025						
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