COVINITOR

US-Mexico Border COVID-19 Risk Monitor

☰ Menu

What is COVID-19 Risk Level?

According to the Harvard Global Health Institute and Brown School of Public Health, risk-levels of COVID-19 are computed by daily new cases per 100,000 people (7-day rolling average).

[Learn more < https://globalepidemics.org/wp-content/uploads/2020/06/key_metrics_and_indicators_v4.pdf >](https://globalepidemics.org/wp-content/uploads/2020/06/key_metrics_and_indicators_v4.pdf)

GREEN	YELLOW	ORANGE	RED
Definition: <1 daily new case per 100,000 people	**Definition:** 1-9 daily new cases per 100,000 people	**Definition:** 10-24 daily new cases per 100,000 people	**Definition:** 25+ daily new cases per 100,000 people
Indicates: close to containment	**Indicates:** potential community spread	**Indicates:** escalating community spread	**Indicates:** unchecked community spread

Interventions: Continue testing, contact tracing, limiting gatherings, and isolating infected people to suppress outbreaks.

Interventions: Continue testing, contact tracing, and social distancing, as well as masking, isolating, and other measures.

Interventions: Stay-at-home orders may be necessary, unless it is possible to surge testing and contact tracing capability.

Interventions: Stay-at-home orders, widespread testing, and mask mandate. Increased contact tracing are necessary.

Press the play button in the map below to see Risk Levels over time ▶
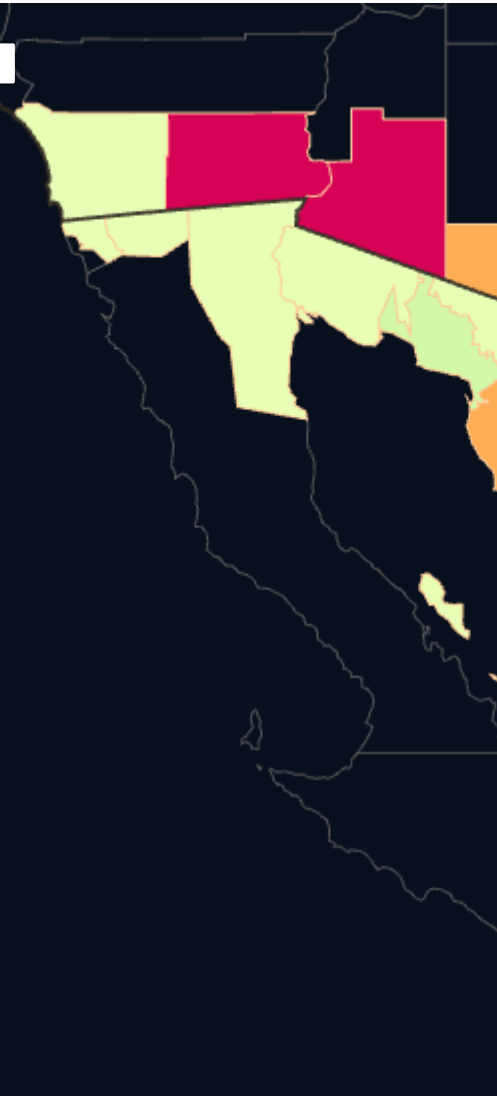
The US COVID-19 data are publicly available and aggregated by NY Times. This data is compiled from authoritative state and local governments and health departments in the United States. The data begins with the first reported coronavirus case in Washington State on Jan. 21, 2020. The Mexico COVID-19 data is published by the Mexico government.

United States source: **The New York Times < https://github.com/nytimes/covid-19-data>**
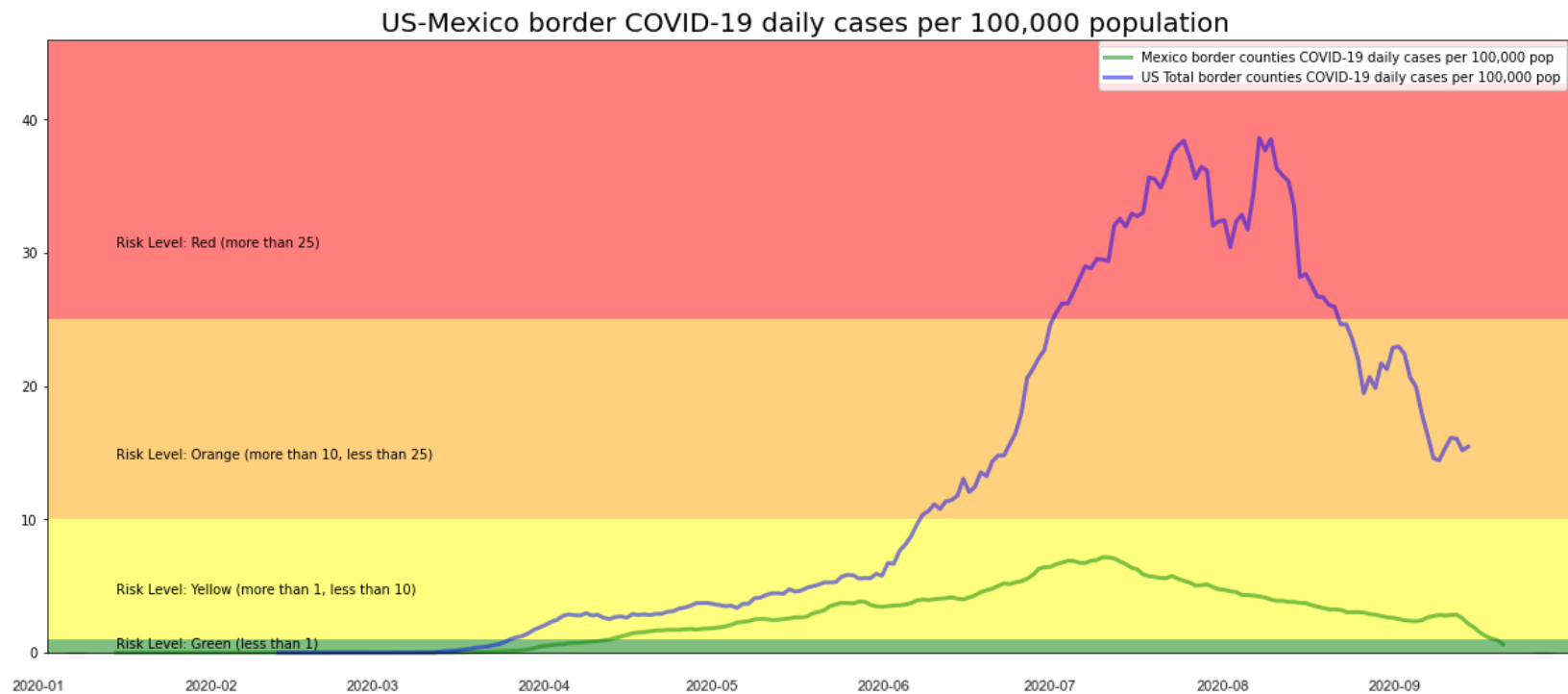Mexico source: **Gobierno de México < https://coronavirus.gob.mx/datos/#DownZCSV>**

How to interact with the map?

By pressing the bottom play button, you can observe all data over time. In this example, we show daily COVID-19 cases per 100,000 population for over 3200 US counties since Jan 20, 2020.

COVID-19 Daily Cases & Risk Levels in Border Counties/Municipalities

"Daily cases per 100,000 people" or "The 7-day moving average of new cases" was calculated to smooth expected variations in daily counts. Total cases were reported by American & Mexican state and territorial jurisdictions, starting from January 21, 2020.

US-Mexico border COVID-19 daily cases per 100,000 population

United States source: **The New York Times < https://github.com/nytimes/covid-19-data>**
Mexico source: **Gobierno de México < https://coronavirus.gob.mx/datos/#DownZCSV>**

US-Mexico Border Communities Risk Level Today

14
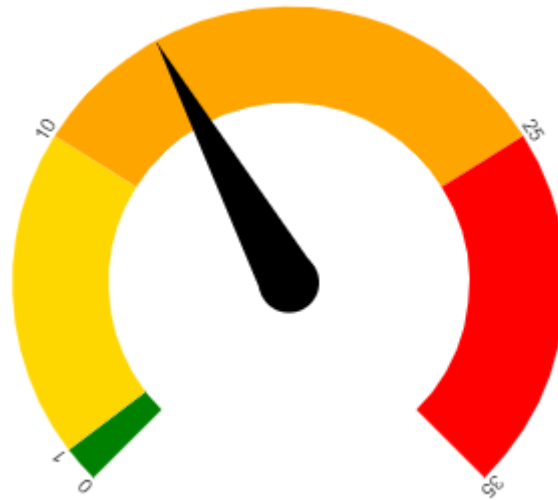
US border counties daily cases per 100,000 people

Updated Sep 22, 2020

1

Mexico border municipalities daily cases per 100,000 people

Updated Sep 22, 2020

United States source: **The New York Times < https://github.com/nytimes/covid-19-data>**
Mexico source: **Gobierno de México < https://coronavirus.gob.mx/datos/#DownZCSV>**

US-Mexico Border Crossings in 2019-2020

The Bureau of Transportation Statistics (BTS) provides inbound crossing data across the U.S.-Canada and U.S.-Mexico borders at the port level. We summarize the number of passengers and pedestrians from January 2019 to July 2020.

Press the play button in the following map to see Risk Levels over time ▶

kepler.gl

2.5.5

Layers

border_total_crossings1.csv >
532 rows

us_border.json >
1 rows

Add Data

Point
Hexagon

us_border
Geojson

Add Layer

Layer Blending

normal

Date   Y Axis
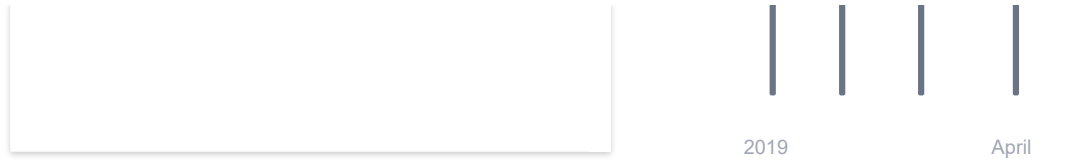
2019 April
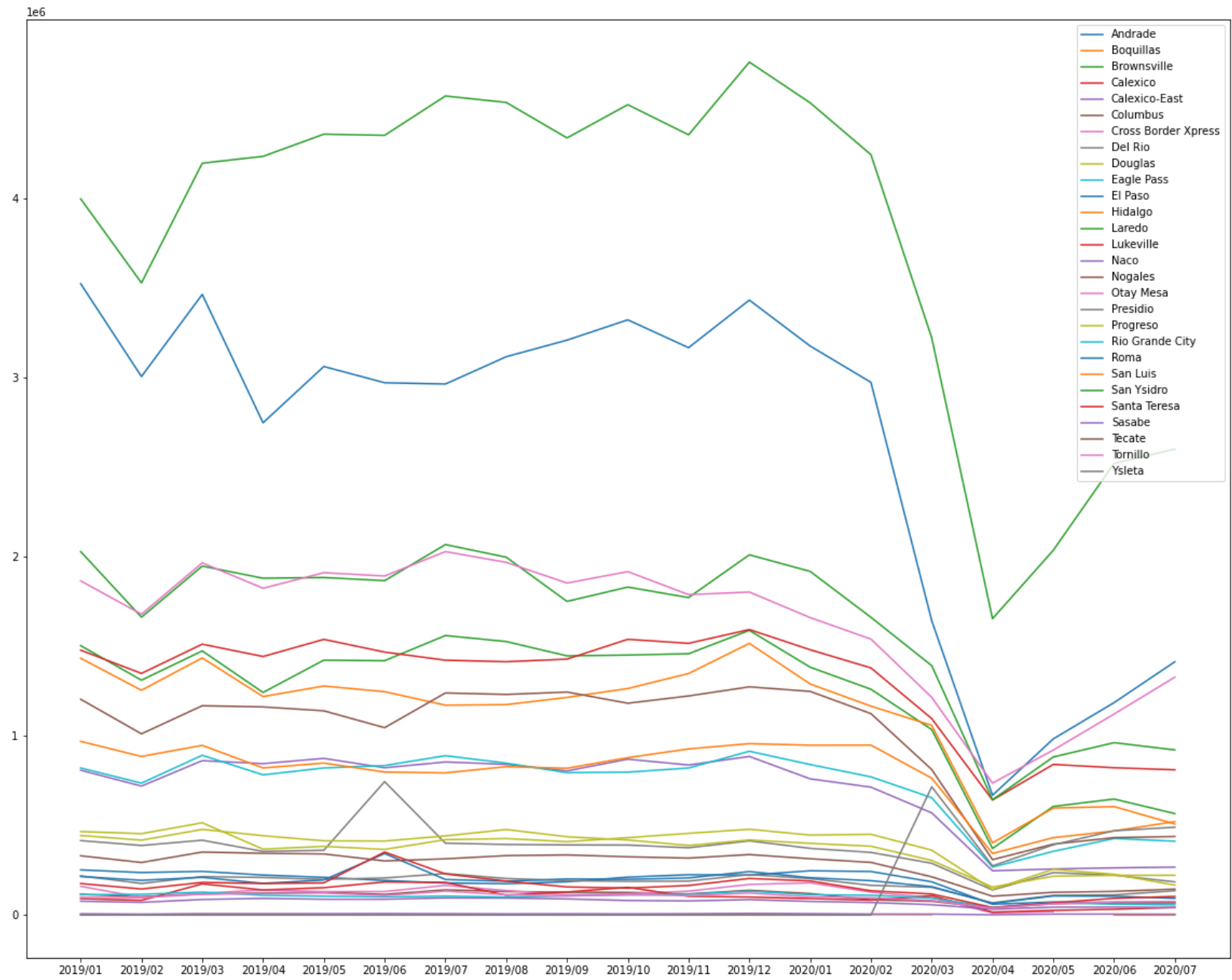
Source: **[The Bureau of Transportation Statistics < https://www.bts.gov/content/border-crossingentry-data>](https://www.bts.gov/content/border-crossingentry-data)**

Border crossing passengers of all US-Mexico border ports

Source: **The Bureau of Transportation Statistics < https://www.bts.gov/content/border-crossingentry-data>**

Trends and Seasonality Tests for US COVID-19 Daily Cases

By the Dickey-Fuller test, we see data of COVID-19 time series shows a trend. (More info about this trend will be mentioned below).
In particular, based on the autocorrelation plot of the first 30 days, the trend is strong with no apparent seasonality.

Time Series Analysis Plots
Dickey-Fuller: p=0.25014

Autocorrelation

Partial Autocorrelation
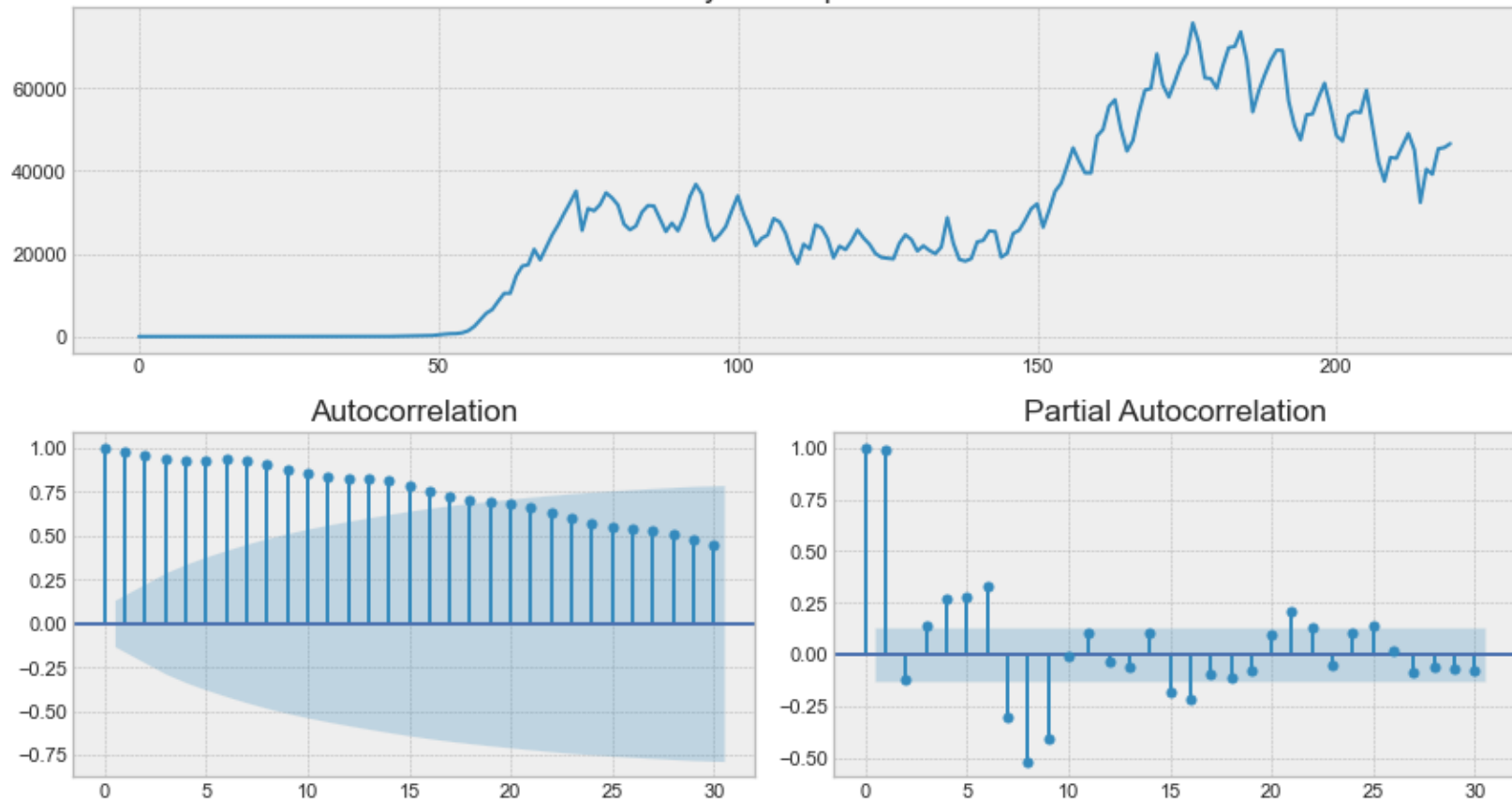
United States source: **The New York Times < https://github.com/nytimes/covid-19-data>**

To make the process more stationary, we subtract the time series from itself with a lag of one day.
This would give us the following plot.
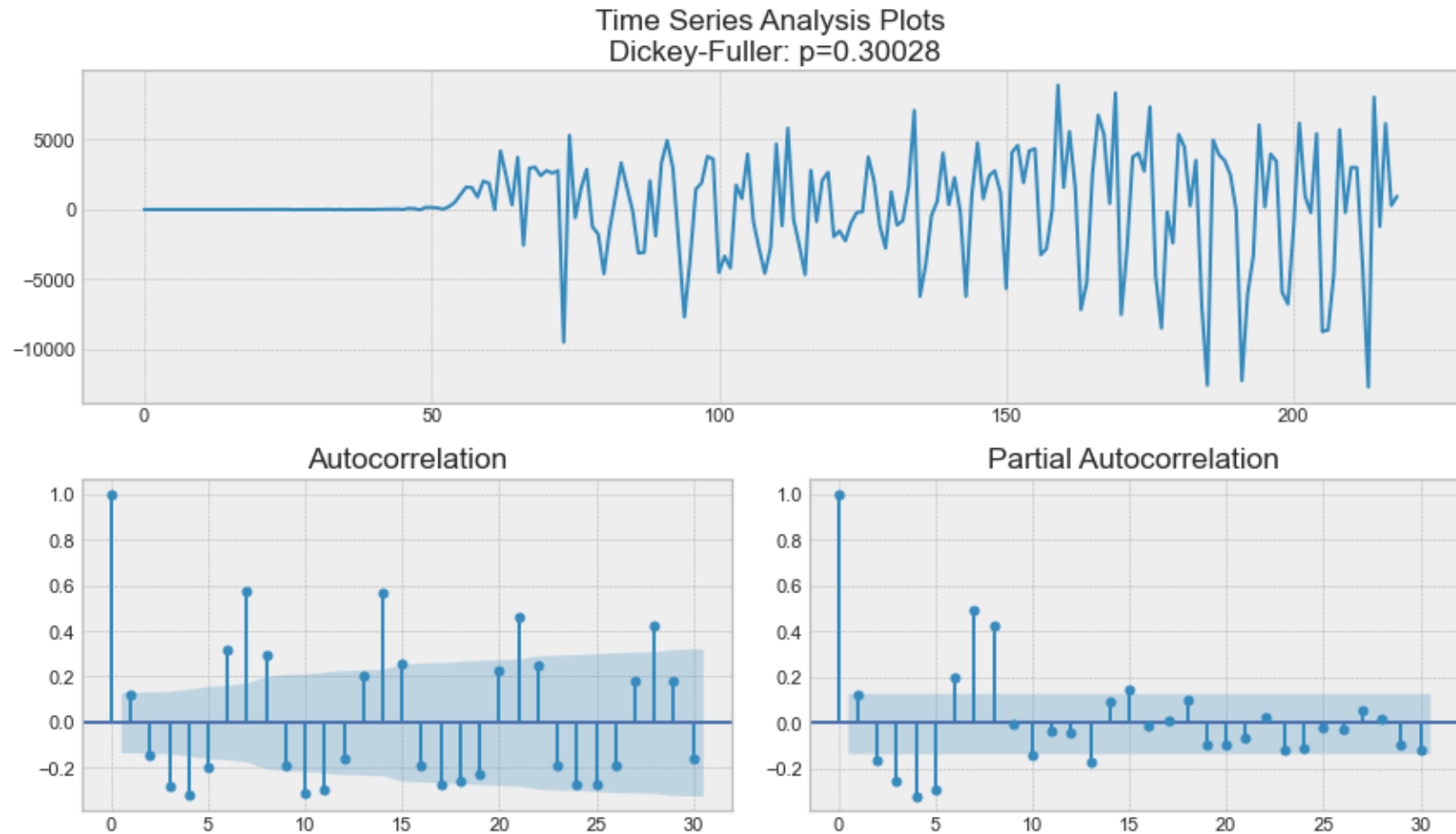
Time Series Analysis Plots
Dickey-Fuller: p=0.30028

United States source:

With the stationary data, we see the autocorrelation plot looks like a sinusoidal function, which implies seasonality. We can count the period in the plot above and witness a 7-day period.

According to a study of Tel Aviv University, the 7-day periodicity of COVID-19 is due to weekend gatherings and the approximation of 5-day incubation period.

"Susceptible/older people may become infected at higher rates during weekend-days compared to weekdays, as a result of increased social interactions with younger relatives or friends. Under this assumption, it follows that these vulnerable individuals exhibit clinical signs of COVID-19 infection at higher rates ~5 days after the weekend, on Thursday-Friday... In the US, the low range of daily deaths in the period assessed is about 1700, while the high range is about 2500. We believe that social distancing may lower such differences."

<div align="center">Reference</div>

Ricon-Becker, I., Tarrasch, R., Blinder, P., Ben-Eliyahu, S. (2020). "A seven-day cycle in COVID-19 infection and mortality rates: Are intergenerational social interactions on the weekends killing susceptible people?". [https://www.medrxiv.org/content/10.1101/2020.05.03.20089508v1.full.pdf.](https://www.medrxiv.org/content/10.1101/2020.05.03.20089508v1.full.pdf) *<* [https://www.medrxiv.org/content/10.1101/2020.05.03.20089508v1.full.pdf.>](https://www.medrxiv.org/content/10.1101/2020.05.03.20089508v1.full.pdf) *Tel Aviv University. Retrieved on Sep 23, 2020.*

How to Make Your Travel Decisions Based on Risk Level?

| Travel Advisory September 8, 2020 | Mexico - Level 3: Reconsider Travel | C H K |

Source: **U.S. Department of State - Bureau of Consular Affairs < https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories/mexico-travel-advisory.html>**

Even though Mexican municipalities have a risk-level of Green (< 1 daily new case per 100k people, showing a close to containment of Coronavirus), the travel advisory said you should reconsider travelling. In particular, the CDC issued a travel alert for Mexico with a level 3 of Travel Health Notice during COVID-19. Some regions in Mexico still face an increasing trend of daily new cases, whereas others report a high volume of hospitalization. You should stay at home, practice social distancing, and follow guidelines of the authority.

For the United States, the risk level at border counties is Orange (from 10 to 24 daily new cases per 100k people). This means there is an escalating spread in the community. Moreover, the country's overal deaths surpassed 200,000 people, and the CDC also issued a level 3 of Travel Health Notice. Level 3 means the COVID-19 risk is high. Thus, we must obey shelter-in-place rules, wear masks in public places, avoid close contact, and continue testing plus contact tracing.

Source: **Centers for Disease Control and Prevention < https://www.cdc.gov/coronavirus/2019-ncov/travelers/map-and-travel-notices.html>**

COVID-19 Latest News

English News   **Spanish News**

🚑 NBC Bay Area
[Seniors 65 and Up Can Schedule COVID-19 Vaccine in Contra Costa County < https://www.nbcbayarea.com/news/local/race-for-a-vaccine/seniors-65-and-up-can-schedule-covid-19-vaccine-in-contra-costa-county/2445457/>](https://www.nbcbayarea.com/news/local/race-for-a-vaccine/seniors-65-and-up-can-schedule-covid-19-vaccine-in-contra-costa-county/2445457/) NBC Bay Area
Thu, 14 Jan 2021 21:53:34 GMT

🚑 Health Affairs
[Supporting Health Care Competition In The Era Of COVID-19: Three Legislative Models For States < https://www.healthaffairs.org/do/10.1377/hblog20201221.230335/full/>](https://www.healthaffairs.org/do/10.1377/hblog20201221.230335/full/) Health Affairs
Mon, 04 Jan 2021 13:29:49 GMT

🚑 KTVQ Billings News
[Second donation funds cash incentive for COVID-19 vaccinations in Yellowstone County < https://www.ktvq.com/news/coronavirus/second-donation-funds-cash-incentive-for-covid-19-vaccinations-in-](https://www.ktvq.com/news/coronavirus/second-donation-funds-cash-incentive-for-covid-19-vaccinations-in-)

🚑 BBC News Mundo
[Por qué la pandemia de covid-19 ha dado lugar a tantas teorías conspirativas que ponen en riesgo la batalla contra el coronavirus < https://www.bbc.com/mundo/noticias-54706193>](https://www.bbc.com/mundo/noticias-54706193) BBC News Mundo
Mon, 02 Nov 2020 08:00:00 GMT

🚑 Los Angeles Times
[COVID-19 claims more young U.S. victims as deaths climb again < https://www.latimes.com/espanol/eeuu/articulo/2021-08-16/coronavirus-covid-cada-vez-hay-mas-victimas-jovenes-y-muertes>](https://www.latimes.com/espanol/eeuu/articulo/2021-08-16/coronavirus-covid-cada-vez-hay-mas-victimas-jovenes-y-muertes) Los Angeles Times
Mon, 16 Aug 2021 16:48:00 GMT

🚑 The Dallas Morning News
[Texas: Científicos descubren nueva variante de covid-19 en Brazos Valley < https://www.dallasnews.com/espanol/al-dia/noticias-texas/2021/04/23/texas-cientificos-descubren-nueva-variante-de-covid-19-en-brazos-valley/>](https://www.dallasnews.com/espanol/al-dia/noticias-texas/2021/04/23/texas-cientificos-descubren-nueva-variante-de-covid-19-en-brazos-valley/) The Dallas Morning News
Fri, 23 Apr 2021 07:00:00 GMT

yellowstone-county> KTVQ Billings News
Tue, 18 May 2021 16:57:24 GMT

🚑 West Virginia Department of Health and Human Resources
COVID-19 Daily Update 2-28-2021 < https://dhhr.wv.gov/News/2021/Pages/ COVID-19-Daily-Update-2-28-2021.aspx> West Virginia Department of Health and Human Resources
Sun, 28 Feb 2021 15:14:30 GMT

🚑 Department of Justice
Chesterland Man Charged with COVID-19 Relief Fraud | USAO-NDOH < https://www.justice.gov/usao-ndoh/pr/chesterland-man-charged-covid-19-relief-fraud> Department of Justice
Fri, 16 Jul 2021 15:12:58 GMT

🚑 Reuters
Pelosi says Democrats unveil new COVID-19 aid bill < https://www.reuters.com/article/us-health-coronavirus-usa-pelosi/pelosi-

🚑 BBC News Mundo
Coronavirus: por qué en el futuro deberíamos tratar la covid-19 como el norovirus y no como la gripe < https://www.bbc.com/mundo/noticias-57777965> BBC News Mundo
Mon, 12 Jul 2021 07:00:00 GMT

🚑 Telemundo 52
Corte Superior de Los Ángeles exigirá vacunas contra COVID-19 a sus empleados < https://www.telemundo52.com/noticias/local/empleados-corte-superior-los-angeles-deberan-vacunarse-contra-covid19/2206905/> Telemundo 52
Fri, 06 Aug 2021 20:24:19 GMT

🚑 Delfino.cr
Tres cantones no registraron casos nuevos de COVID-19 el 11 de mayo < https://delfino.cr/2021/05/tres-cantones-no-registraron-casos-nuevos-de-covid-19-el-11-de-mayo> Delfino.cr
Wed, 12 May 2021 00:06:42 GMT

[**says-democrats-unveil-new-covid-19-aid-bill-idUSKBN26J38T>**](says-democrats-unveil-new-covid-19-aid-bill-idUSKBN26J38T) Reuters
Mon, 28 Sep 2020 22:40:00 GMT

National Institutes of Health
[**Scientists discover genetic and immunologic underpinnings of some cases of severe COVID-19 < https://www.nih.gov/news-events/news-releases/scientists-discover-genetic-immunologic-underpinnings-some-cases-severe-covid-19>**](https://www.nih.gov/news-events/news-releases/scientists-discover-genetic-immunologic-underpinnings-some-cases-severe-covid-19) National Institutes of Health
Thu, 24 Sep 2020 07:00:00 GMT

Science Magazine
[**What went wrong with CureVac's highly anticipated new mRNA vaccine for COVID-19? < https://www.sciencemag.org/news/2021/06/what-went-wrong-curevac-s-highly-anticipated-new-mrna-vaccine-covid-19>**](https://www.sciencemag.org/news/2021/06/what-went-wrong-curevac-s-highly-anticipated-new-mrna-vaccine-covid-19) Science Magazine
Fri, 18 Jun 2021 13:10:00 GMT

Bay News 9

infobae
[**Qué hacen los centros de vacunación contra el COVID-19 de Florida con las dosis que sobran porque alguien no acudió a su cita para inocularse < https://www.infobae.com/america/eeuu/2021/03/09/que-hacen-los-centros-de-vacunacion-contra-el-covid-19-de-florida-con-las-dosis-que-sobran-porque-alguien-no-acudio-a-su-cita-para-inocularse/>**](https://www.infobae.com/america/eeuu/2021/03/09/que-hacen-los-centros-de-vacunacion-contra-el-covid-19-de-florida-con-las-dosis-que-sobran-porque-alguien-no-acudio-a-su-cita-para-inocularse/) infobae
Tue, 09 Mar 2021 23:10:30 GMT

EL PAÍS
[**Estados Unidos exige un test negativo de la covid-19 a los viajeros que llegan en avión < https://elpais.com/sociedad/2021-01-26/estados-unidos-exige-un-test-negativo-de-la-covid-19-a-los-viajeros-que-llegan-en-avion.html>**](https://elpais.com/sociedad/2021-01-26/estados-unidos-exige-un-test-negativo-de-la-covid-19-a-los-viajeros-que-llegan-en-avion.html) EL PAÍS
Tue, 26 Jan 2021 18:07:00 GMT

BBC News Mundo
[**Coronavirus: cómo limpiar tu celular**](Coronavirus-como-limpiar-tu-celular)

[Florida Churches Join COVID-19 Vaccination Effort < https://www.baynews9.com/fl/tampa/news/2021/01/10/florida-churches-join-covid-19-vaccination-effort>](https://www.baynews9.com/fl/tampa/news/2021/01/10/florida-churches-join-covid-19-vaccination-effort) Bay News 9
Sun, 10 Jan 2021 22:02:00 GMT

nejm.org
[Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine | NEJM < https://www.nejm.org/doi/full/10.1056/NEJMoa2034577>](https://www.nejm.org/doi/full/10.1056/NEJMoa2034577) nejm.org
Thu, 10 Dec 2020 14:10:07 GMT

KPTV.com
[Oregon Health Authority reports 12 new COVID-19 related deaths, 621 additional cases < https://www.kptv.com/news/oregon-health-authority-reports-12-new-covid-19-related-deaths-621-additional-cases/article_7e357942-6caa-11eb-a2c1-bbfc1832c633.html>](https://www.kptv.com/news/oregon-health-authority-reports-12-new-covid-19-related-deaths-621-additional-cases/article_7e357942-6caa-11eb-a2c1-bbfc1832c633.html) KPTV.com
Thu, 11 Feb 2021 20:48:00 GMT

[para prevenir el contagio del covid-19 < https://www.bbc.com/mundo/noticias-51853456>](https://www.bbc.com/mundo/noticias-51853456) BBC News Mundo
Thu, 12 Mar 2020 07:00:00 GMT

infobae
[Estudian un nuevo tratamiento contra COVID-19 que reduce hasta 79% el riesgo de internación y muerte < https://www.infobae.com/america/ciencia-america/2021/10/29/estudian-un-nuevo-tratamiento-contra-covid-19-que-reduce-hasta-79-el-riesgo-de-internacion-y-muerte/>](https://www.infobae.com/america/ciencia-america/2021/10/29/estudian-un-nuevo-tratamiento-contra-covid-19-que-reduce-hasta-79-el-riesgo-de-internacion-y-muerte/) infobae
Fri, 29 Oct 2021 04:32:28 GMT

Telemundo Nueva Inglaterra
[Las píldoras COVID-19 son "emocionantes" pero no reemplazan la vacuna, dice un médico de Boston < https://www.telemundonuevainglaterra.com/noticias/local/las-pildoras-covid-19-son-emocionantes-pero-no-reemplazan-la-vacuna-dice-un-medico-de-boston/2167164/>](https://www.telemundonuevainglaterra.com/noticias/local/las-pildoras-covid-19-son-emocionantes-pero-no-reemplazan-la-vacuna-dice-un-medico-de-boston/2167164/) Telemundo Nueva Inglaterra
Wed, 15 Dec 2021 00:12:25 GMT

 Science Magazine

[U.K. variant puts spotlight on immunocompromised patients' role in the COVID-19 pandemic < https://www.sciencemag.org/news/2020/12/uk-variant-puts-spotlight-immunocompromised-patients-role-covid-19-pandemic>](https://www.sciencemag.org/news/2020/12/uk-variant-puts-spotlight-immunocompromised-patients-role-covid-19-pandemic) Science Magazine
Wed, 23 Dec 2020 08:00:00 GMT

 Noticias ONU

[Diez países de América Latina no pagarán por la vacuna COVID-19 gracias a la iniciativa de la OMS < https://news.un.org/es/story/2020/12/1485012>](https://news.un.org/es/story/2020/12/1485012) Noticias ONU
Wed, 02 Dec 2020 08:00:00 GMT

COVID-19 daily cases by county/municipality

United States

California

[San Diego County Coronavirus Cases Today <](#)

Mexico

Updated today in the following Mexican border states

(Coronavirus cases in a specific Mexican municipality are included in the link below)

https://todaystatistics.com/index.php/san-diego-county-coronavirus-cases-today/>

Imperial County Coronavirus Cases Today < https://todaystatistics.com/index.php/imperial-county-coronavirus-cases-today/>

Arizona

Yuma County Coronavirus Cases Today

Pima County Coronavirus Cases Today < https://todaystatistics.com/index.php/pima-county-coronavirus-cases-today/>

Santa Cruz County Coronavirus Cases Today < https://todaystatistics.com/index.php/santa-cruz-county-az-coronavirus-cases-today/ >

Baja California

Infected: 19207

Deceased: 3529

Sonora

Infected: 24418

Deceased: 2853

Chihuahua

Infected: 10746

Deceased: 1358

Coahuila

Infected: 26023

Deceased: 1841

Nuevo León

[Cochise County Coronavirus Cases Today < https://todaystatistics.com/index.php/cochise-county-coronavirus-cases-today/>](https://todaystatistics.com/index.php/cochise-county-coronavirus-cases-today/)

New Mexico

[Hidalgo County Coronavirus Cases Today < https://todaystatistics.com/index.php/hidalgo-county-nm-coronavirus-cases-today/>](https://todaystatistics.com/index.php/hidalgo-county-nm-coronavirus-cases-today/)

[Luna County Coronavirus Cases Today < https://todaystatistics.com/index.php/luna-county-coronavirus-cases-today/>](https://todaystatistics.com/index.php/luna-county-coronavirus-cases-today/)

[Dona Ana County Coronavirus Cases Today < https://todaystatistics.com/index.php/new-mexico coronavirus-cases-us-state/>](https://todaystatistics.com/index.php/new-mexico-coronavirus-cases-us-state/)

Texas

Infected: 39220

Deceased: 2959

Tamaulipas

Infected: 28713

Deceased: 2175

More information can be found on

[Mexican Municipalities Coronavirus < https://coronavirus.gob.mx/datos/#DOView>](https://coronavirus.gob.mx/datos/#DOView)

[Mexico Coronavirus Cases Today < https://todaystatistics.com/index.php/mexico-coronavirus-cases-today/>](https://todaystatistics.com/index.php/mexico-coronavirus-cases-today/)

Daily COVID-19 statistics by countries

[El Paso County Coronavirus Cases Today < https://todaystatistics.com/index.php/el-paso-county-tx-coronavirus-cases-today/>](https://todaystatistics.com/index.php/el-paso-county-tx-coronavirus-cases-today/)

[Hudspeth County Coronavirus Cases Today < https://todaystatistics.com/index.php/hudspeth-county-coronavirus-cases-today/>](https://todaystatistics.com/index.php/hudspeth-county-coronavirus-cases-today/)

[Jeff Davis County Coronavirus Cases Today < https://todaystatistics.com/index.php/jeff-davis-county-tx-coronavirus-cases-today/>](https://todaystatistics.com/index.php/jeff-davis-county-tx-coronavirus-cases-today/)

[Presidio County Coronavirus Cases Today < https://todaystatistics.com/index.php/presidio-county-coronavirus-cases-today/>](https://todaystatistics.com/index.php/presidio-county-coronavirus-cases-today/)

[Brewster County Coronavirus Cases Today <](https://todaystatistics.com)

Mexico

Show 10 entries

Search:

https://todaystatistics.com/index.php/brewster-county-coronavirus-cases-today/>

Terrell County Coronavirus Cases Today < https://todaystatistics.com/index.php/terrell-county-tx-coronavirus-cases-today/>

Val Verde County Coronavirus Cases Today < https://todaystatistics.com/index.php/val-verde-county-coronavirus-cases-today/>

Kinney County Coronavirus Cases Today < https://todaystatistics.com/index.php/kinney-county-coronavirus-cases-today/>

Maverick County Coronavirus Cases Today < https://todaystatistics.com/index.php/

Date	Total Cases	New Cases	Deaths
2021-12-16	3927265	2627	29735
2021-12-15	3924638	5651	29718
2021-12-14	3918987	771	2967
2021-12-13	3918216	855	2966
2021-12-12	3917361	2655	29662
2021-12-11	3914706	2992	29638
2021-12-10	3911714	0	29618
2021-12-09	3911714	6395	29618
2021-12-08	3905319	3304	29560

maverick-county-coronavirus-cases-today/>

Webb County Coronavirus Cases Today < https://todaystatistics.com/index.php/ webb-county-coronavirus-cases-today/>

Zapata County Coronavirus Cases Today < https://todaystatistics.com/index.php/z apata-county-coronavirus-cases-today/>

Starr County Coronavirus Cases Today < https://todaystatistics.com/index.php/s tarr-county-coronavirus-cases-today/>

Hidalgo County Coronavirus Cases Today < https://todaystatistics.com/index.php/ hidalgo-county-tx-coronavirus-cases-today/>

Date	Total Cases	New Cases	Deaths
2021-12-07	3902015	0	2953

Showing 1 to 10 of 658 entries

Previous   1   2   3   4   5

...   66   Next

United States

Show 10 entries

Search:

[Cameron County Coronavirus Cases Today < https://todaystatistics.com/index.php/cameron-county-tx-coronavirus-cases-today/>](https://todaystatistics.com/index.php/cameron-county-tx-coronavirus-cases-today/)

Date	Total Cases	New Cases	Deaths
2021-12-17	50513428	138885	8036!
2021-12-16	50374543	141205	8025:
2021-12-15	50233338	113749	8003₄
2021-12-14	50119589	198184	7987
2021-12-13	49921405	36818	7973₄
2021-12-12	49884587	51148	7971;
2021-12-11	49833439	172294	7967₆
2021-12-10	49661145	117619	7946₄
2021-12-09	49543526	156318	7932:

Date	Total Cases	New Cases	Death:
2021-12-08	49387208	108930	7915

Showing 1 to 10 of 691 entries

Previous 1 2 3 4 5 … 70 Next

Sources

United States source: **The New York Times < https://github.com/nytimes/covid-19-data>**
Mexico source: **Gobierno de México < https://coronavirus.gob.mx/datos/#DownZCSV>**
Analysis: **Time series analysis < https://towardsdatascience.com/the-complete-guide-to-time-series-analysis-and-forecasting-70d476bfe775>**

Up ↑