Team A: Does coronavirus rise and fall with the seasons?

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Objetivo del Curso

The main goal of this challenge is to understand if the atmospheric conditions in a particular location can modulate the propagation of Covid-19. The course will be split into two main themes: i) Data analysis and statistics with simple Python programming and ii) the influence of climate and weather in Covid-19. By the end of this challenge you will learn how to visualize data and will have a basic understanding of why some meteorological factors can modulate the Covid-19 propagation. Some questions that can be addressed in this challenge. Is the Covid-19 pandemic influenced by seasons? Are the meteorological conditions in my city an important factor in the propagation of the virus? What are the social factors tied to meteorological conditions that can have an impact on propagation of Covid-19? Is there a relationship between the particle size with viral load and the propagation of the Covid-19?

La meta principal de este curso es determinar si las condiciones atmosféricas en una ciudad modulan la propagación del Covid-19. El curso se dividirá en dos temas principales: i) Análisis de datos y estadística utilizando Python y ii) la influencia del clima en Covid-19. Al final de este challenge, aprenderás a visualizar datos y tendrás un entendimiento básico de porqué algunos factores meteorológicos modulan la propagación del Covid-19. Algunas preguntas que analizaremos en este curso: El Covid-19 está influenciado por las estaciones del año? ¿Las condiciones meteorológicas en tu ciudad son importantes en la propagación del virus? ¿Qué factores sociales están ligados a las condiciones meteorológicas de tu ciudad y cómo estas pueden tener un impacto en la propagación del Covid-19? Qué relación tiene el tamaño de partículas con contenido viral en la propagación del Covid-19.

Schedule

Friday	Student Introduction (Where are they living) and interests. (This to decide teams for Challenge) Describe the Course Schedule. COVID-19 presentation. What is COVID-19? How does it propagate? Describe scientific methods and peer-reviewed publication methods. Breakout rooms- (10-minute discussion if meteorological factors play a role in COVID-19)
Monday	Statistics and Data Analysis presentation. What is mean, standard deviation, and errors in data. (15 minutes). Time series analysis. Google Colab exercise using data from COVID-19 in México and temperature from a specific location. Learn how to read data.
Tuesday	Meteorological conditions in your city Explore COVID19 data from your city Exponential curve Errors in data Correlation, trends and patterns Seasonal Behavior in your city

Wednesday, Thursday and Friday	Q&A 30 minutes per team