NOTE: I requested an extension on this:

This project examines the role of Machine Learning in predicting COVID-19 new daily trends and growth over time. This is a Real-Time Communications project done with real-time data. I will design an algorithm that will help governments, individuals, product, strategy, and business development decision-makers, etc, to predict trends and make informed decisions in these tough and mostly unpredictable times. Many entities that rely on human performance will find that this algorithm does a good job of predicting cover patterns - hence, it's easy to plan for future budgeting and other affected areas.

Machine Learning and Artificial Intelligence are powerful methods to extract meaning from data. Given an input of daily updates such as the number of new cases per country, we can implement the several algorithms in ML that help us explore data and teach a machine to act on it and find predictions. A machine learning analysis of all the different prediction models is a good way to start.

COVID data is available online and is updated daily. Websites such as WHO give free and accessible data that is updated on a daily basis; such resources will be helpful in extracting what I want for the analysis. If I can teach my model to make a decision on the future based on real-time data, this would make it possible for the algorithm to recognize, learn, and predict trends. The project will involve a lot of learning and web-scraping to find the data and adapt algorithms to daily-updated data. This method has been used in other areas of applications such as stock market predictions.

I will attempt to implement several models and check which one is the most effective. Different models can be ambitious but possible, for example, regressions, decision trees, SVM, etc.

I will then have to implement an algorithm that is able to account for the real-time updates. I could also cluster and find patterns within data to find reasons why countries with closely similar daily cases increase rate behave that way, including finding relationships between these countries' data.

The immediate way to know if the algorithm is successful is by checking the error rate to see if it is,

1. Minimized and,
2. Reduced each new day after some period of learning.

I will have to manually do testing by updating the data gradually and watching the effectiveness of the different selected models.