A distributed & anonymous ledger of COVID-19 patient information.

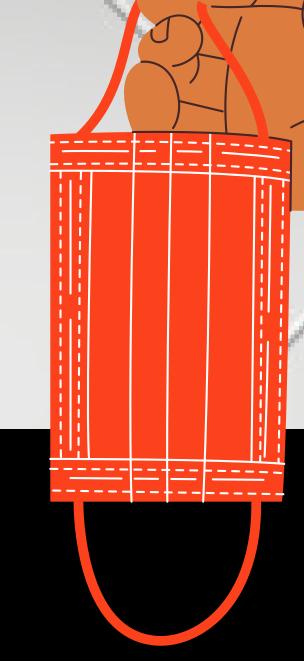
## Blockchain-19

Creators: Christian Lussier, Jordan Wilson, & Ryan Hilty

CMPSC 390 - Cryptocurrency Engineering w/ Dr. Jumadinova

Blockchain tech is commonly used to store cryptocurrency transaction records. The Blockchain is a distributed decentralized, and anonymous ledger.

Blockchain-19 stores information of COVID-19 patient statuses anonymously & confidentially using a Blockchain approach.



Each patient has a unique ID along with hospital and treatment status information, the basis of a patient block. Each time a patient status changes, a new block for this update or "transaction" is created with a unique identifying hash.

WHY?

HOW?

## For Hospitals:

Track patients and their COVID-19 care statuses via the Blockchain-19 ledger. See what hospital they are in and track their COVID-19 journey.

## For Researchers:

Gain insights about the virus by looking at anonymous patient data. How many people have it, where do they have it, and how severe is their case? Helpful for research.

**The Blockchain-19 Platform!** Makes it easy to add blocks and use the blockchain.

Enter patient ID, hospital, status into a new ledger in our Pythonbased ledger handling program.

Hash = Nonce + a + b + c - Value of Last 2 digits of prev Hash

Program automatically calculates the unique random number, called "hash", identifying each block. It can then export, search, or update the ledger.

- Enter Patient ID: 1283D - Enter the Patient's Status: A
- \*\*\* Would you like to add another block to the blockchain? Y or N: Y Enter Patient Info for Block # 2 :
- Enter Patient Hospital: Highmark
- Enter Patient ID: 2399A
- Enter the Patient's Status: C
- \*\*\* Would you like to add another block to the blockchain? Y or N: Y
- Enter Patient Info for Block # 3 :
- Enter Patient Hospital: Presbyterian Enter Patient ID: 32j3D
- Enter the Patient's Status: D

Would you like to add another block to the blockchain? Y or N: N

nting Your Ledger:

hospital	İ	patient	İ	status	İ	nonce	ı		İ	а	İ	b	i	С	i	current_hash
I UMPC	i	1283D	i	Α	i	1	ı	12	i	85	i	68	i	65	i	207
l Highmark	1	2399A	L	C	I	1	ı	7	I	72	I	65	I	67	I	198
l Presbyterian																

The Blockchain is commonly used for currencies like Bitcoin and is the medium by and 15 The medium by which "miners" verify crypto transactions to ensure validity.



