

MICHIGAN STATE
UNIVERSITY

Alpha Presentation

Blockchain Based Vaccine Passport System

The Capstone Experience

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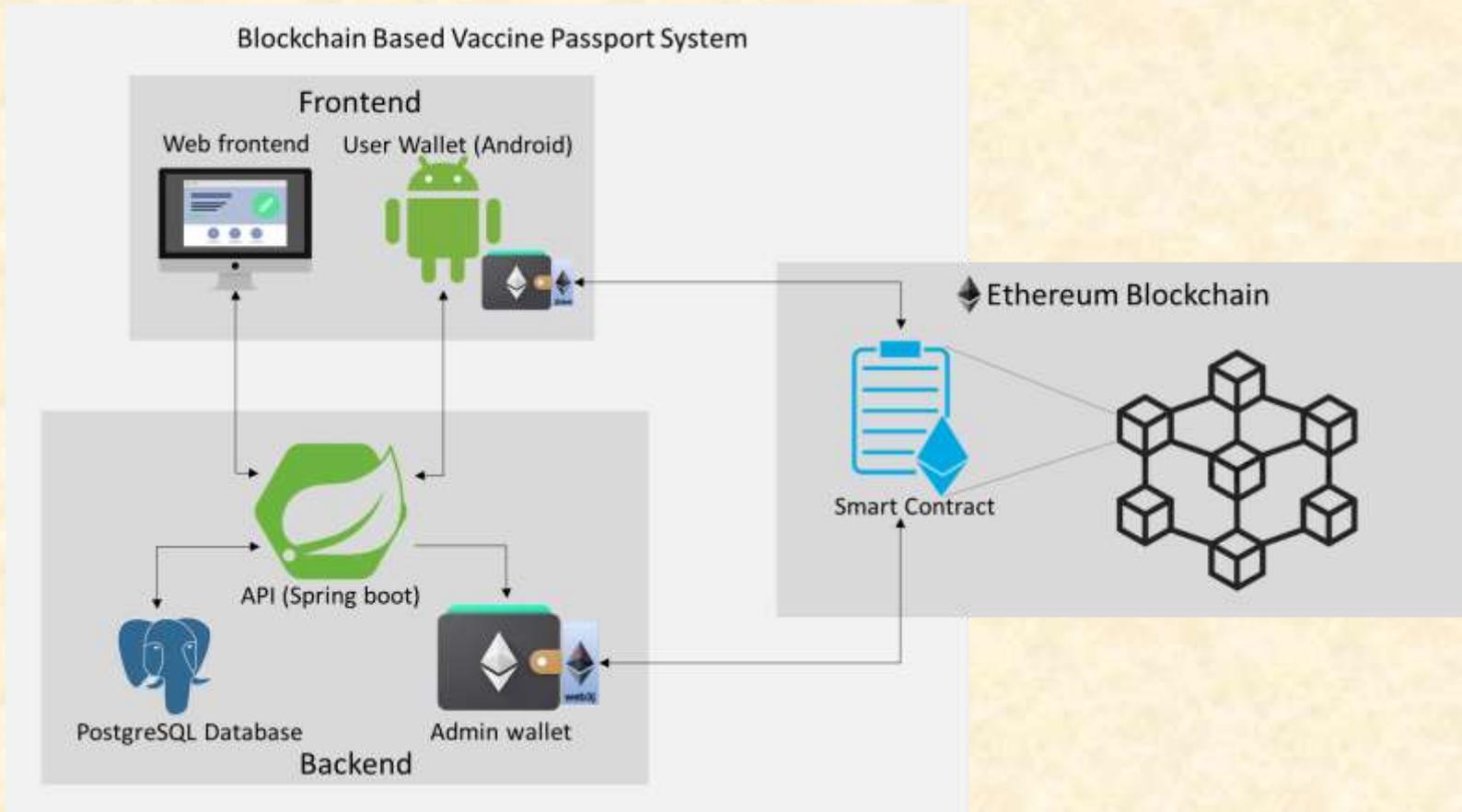
*From Students...
...to Professionals*

Project Overview

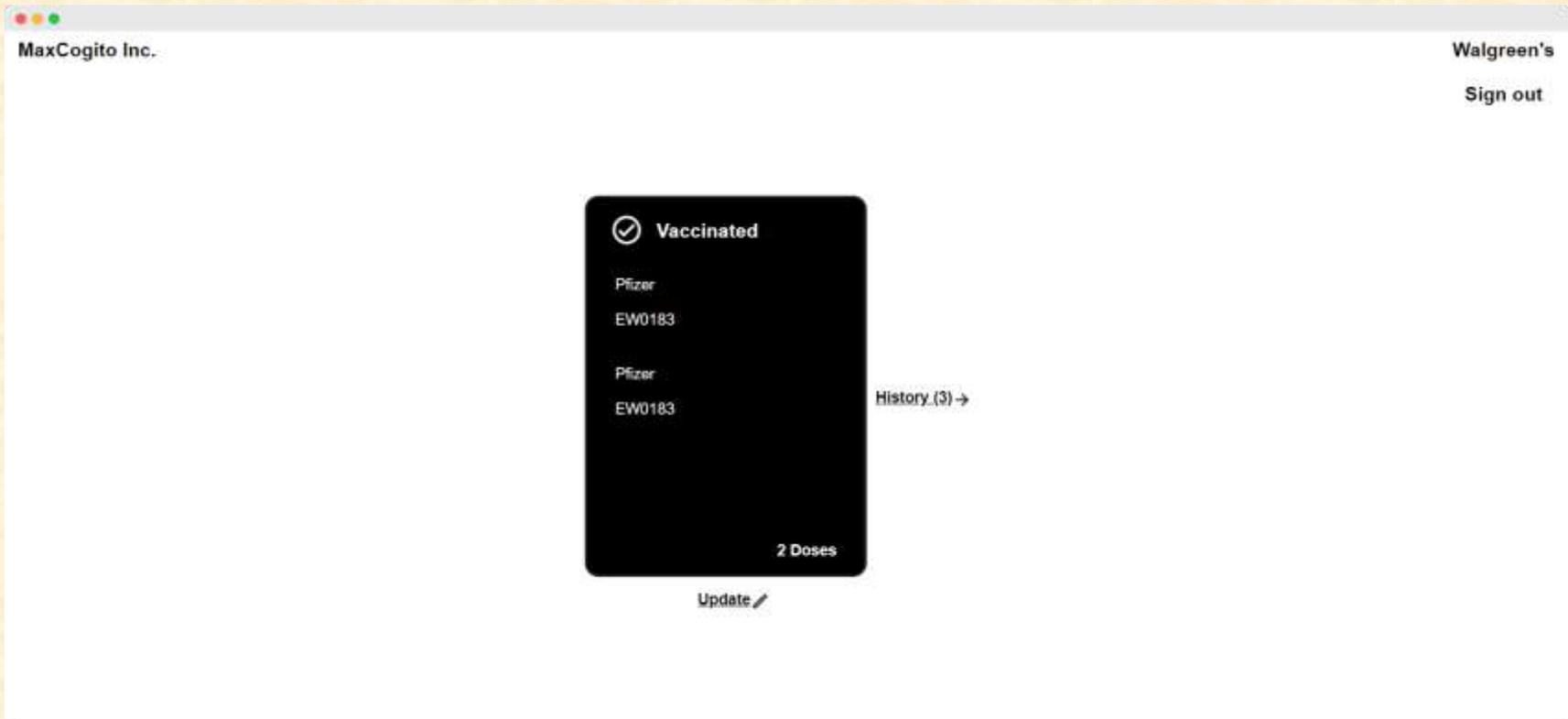
- Secure, verifiable "vaccine passports" are essential for public safety amidst the COVID-19 pandemic.
 - By verifying individual's vaccination statuses, the risk of spreading the virus via travel, sporting events, concerts, etc. can be minimized.
- By leveraging the immutable nature of the blockchain, secure digital "vaccine wallets" can be verified.
 - The goal of this project is to create a system that allows users to easily display vaccination status and request updates.
- The system should support users that don't want a wallet.
 - These users will not have the benefits of the blockchain.



System Architecture



(User) User's Vaccine



(User) Request for update

MaxCogito Inc. Walgreen's
Sign out

[Submit](#)



vaccine_image.png

	Date of Vaccination*	Manufacturer*	Lot Number*	Location*	Dose Number*	
1.	<input type="text" value="2021-04-01"/>	<input type="text" value="pfizer"/>	<input type="text" value="EN6203"/>	<input type="text" value="CVS"/>	<input type="text" value="1"/>	<input style="background-color: black; color: white; border: none; border-radius: 50%; width: 20px; height: 20px; text-align: center; vertical-align: middle;" type="button" value="+"/>
2.	<input type="text" value="2021-04-22"/>	<input type="text" value="pfizer"/>	<input type="text" value="EN9264"/>	<input type="text" value="CVS"/>	<input type="text" value="2"/>	<input style="background-color: black; color: white; border: none; border-radius: 50%; width: 20px; height: 20px; text-align: center; vertical-align: middle;" type="button" value="-"/>
3.	<input type="text" value="2022-01-20"/>	<input type="text" value="moderna"/>	<input type="text" value="D11121A"/>	<input type="text" value="Walgreen's"/>	<input type="text" value="3"/>	<input style="background-color: black; color: white; border: none; border-radius: 50%; width: 20px; height: 20px; text-align: center; vertical-align: middle;" type="button" value="-"/>



(Admin) Account Status Approval Request

MaxCogito Inc. | Covid Vaccine Passport Admin Wigreen's stakers

Users

ID	Username	First Name	Last Name	Email	Phone Number	Status
0	wt	Ben	W	wt@maxcogito.com	802000000	Approved
1	wt@maxcogito.com	David	Johnston	wt@maxcogito.com	802000000	Approved
2	wt@maxcogito.com	Scott	W	wt@maxcogito.com	763000000	Pending
10	wt@maxcogito.com	Wesley	W	wt@maxcogito.com	802000000	Approved
11	wt@maxcogito.com	Wesley	W	wt@maxcogito.com	802000000	Approved
9	wt@maxcogito.com	Carl	W	wt@maxcogito.com	802000000	Approved
12	wt@maxcogito.com	Alan	Hobbs	wt@maxcogito.com	802000000	Approved
13	wt@maxcogito.com	Lucas	W	wt@maxcogito.com	802000000	Approved
14	wt@maxcogito.com	Max	W	wt@maxcogito.com	802000000	Approved
15	wt@maxcogito.com	Ben	W	wt@maxcogito.com	763000000	Approved

(Admin) Vaccine Status Approval Request

MaxCogito Inc. | Covid Vaccine Passport Admin

Walmart's | stakers

Vaccine Records

PersonID	Registration On	Count	Manufacturer	Lot Number	Location	Eligible	Status	
11	2022-01-25	10	pfizer	ED1481	lansing	YES	APPROVED	→
12	2022-02-09	10	johnson&johnson	83782	grossepointe	NO	PENDING	→
8	2022-02-19	3	pfizer	L1708	walgreens	NO	REJECTED	→
9	2022-02-10	2	pfizer	300922	walgreens	NO	REJECTED	→
7	2022-02-18	1	pfizer	EW833	new orleans	NO	APPROVED	→
10	2022-01-23	11	pfizer	ED1481	new orleans	NO	APPROVED	→
6	2022-01-25	2	pfizer	300912	medco	NO	APPROVED	→
4	2022-02-14	2	moderna	TE4012	walmart	NO	REJECTED	→
5	2022-02-18	2	moderna	300832	walmart	NO	PENDING	→
1	2022-02-18	1	pfizer	EW833	new orleans	NO	APPROVED	→
3	2022-02-01	3	pfizer	300834	walmart	NO	APPROVED	→



What's left to do?

- Additional Encryption
 - Creating digital signatures during user registration and for other endpoint requests
- Mobile App
 - Metadata Manager coordination with latest blockchain state
 - Local Review (Android Application Front End)
- Prettier UI (animations, bug fixes, etc.)
- Additional Testing



Questions?

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