

MICHIGAN STATE
UNIVERSITY

Beta Presentation

LIMElight: Life Insurance Made Easy

The Capstone Experience

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From Students...
...to Professionals

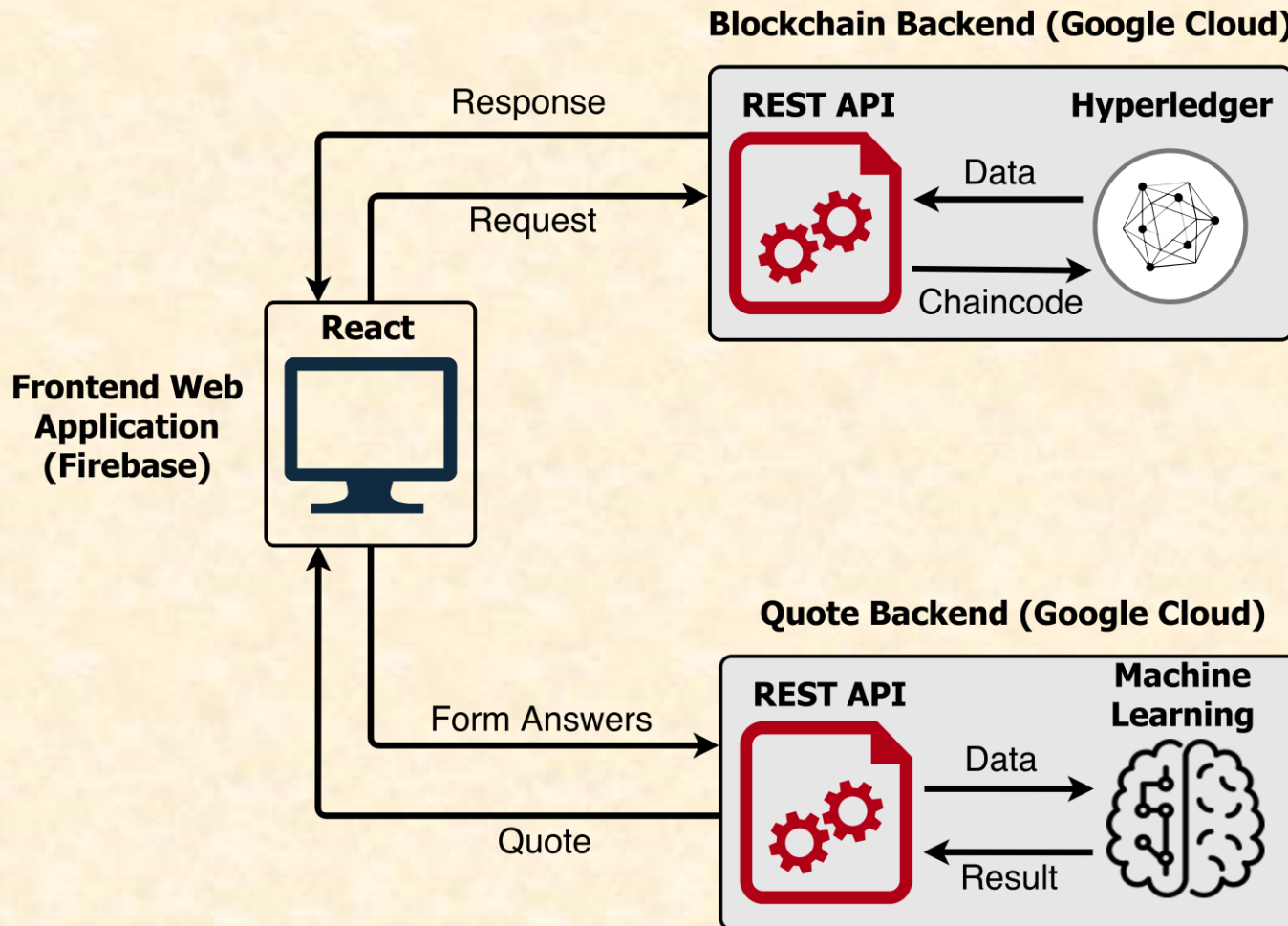
Department of Computer Science and Engineering
Michigan State University
Spring 2018

Project Overview

- Improve life insurance application process for all parties
- Two components
 - Generating personalized term life insurance quotes using machine learning
 - Storing and sharing medical records with blockchain technology



System Architecture



Get A Quote

USAA®

Get A Quote About Visit USAA

Get A Life Insurance Quote

1 ✓ Age

2 Height

6 ft 3 in

3 Coverage Amount

4 Recent Car Accidents


5 Recreational Flying

BACK NEXT

GET A QUOTE



Quote Result



Get A Quote About Visit USAA

Your Personalized Quote

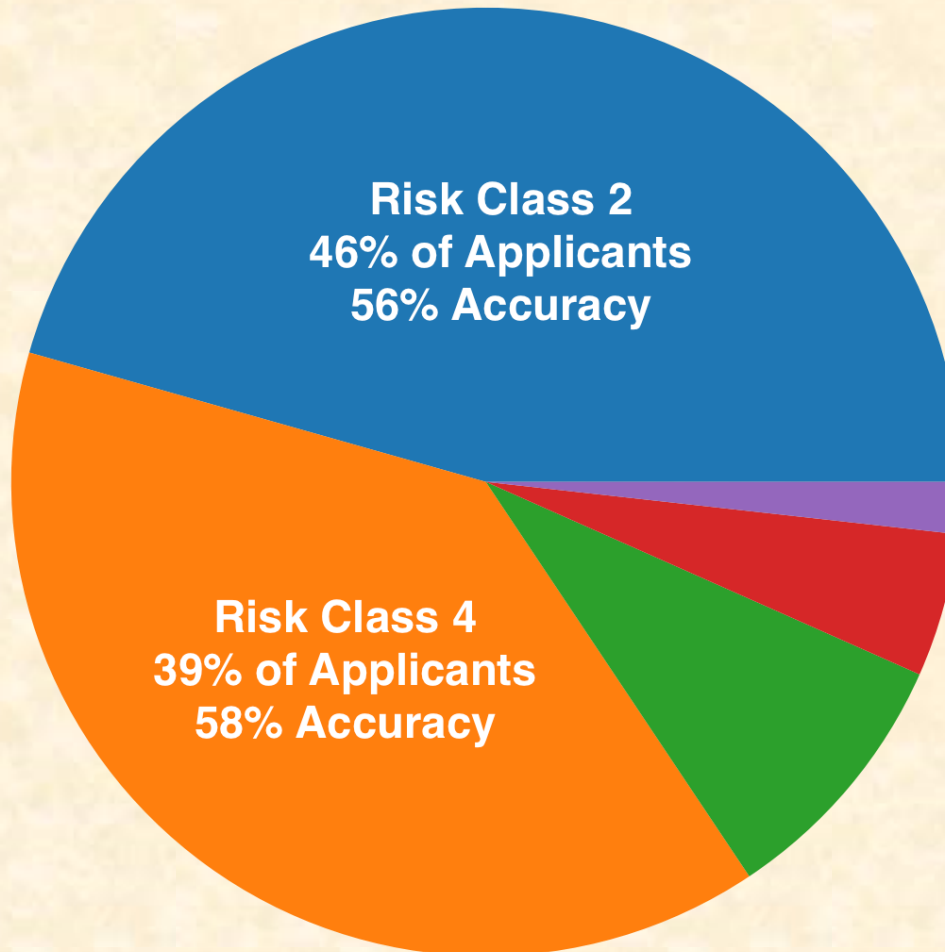
Price
\$60/Month

Quote ID
13611

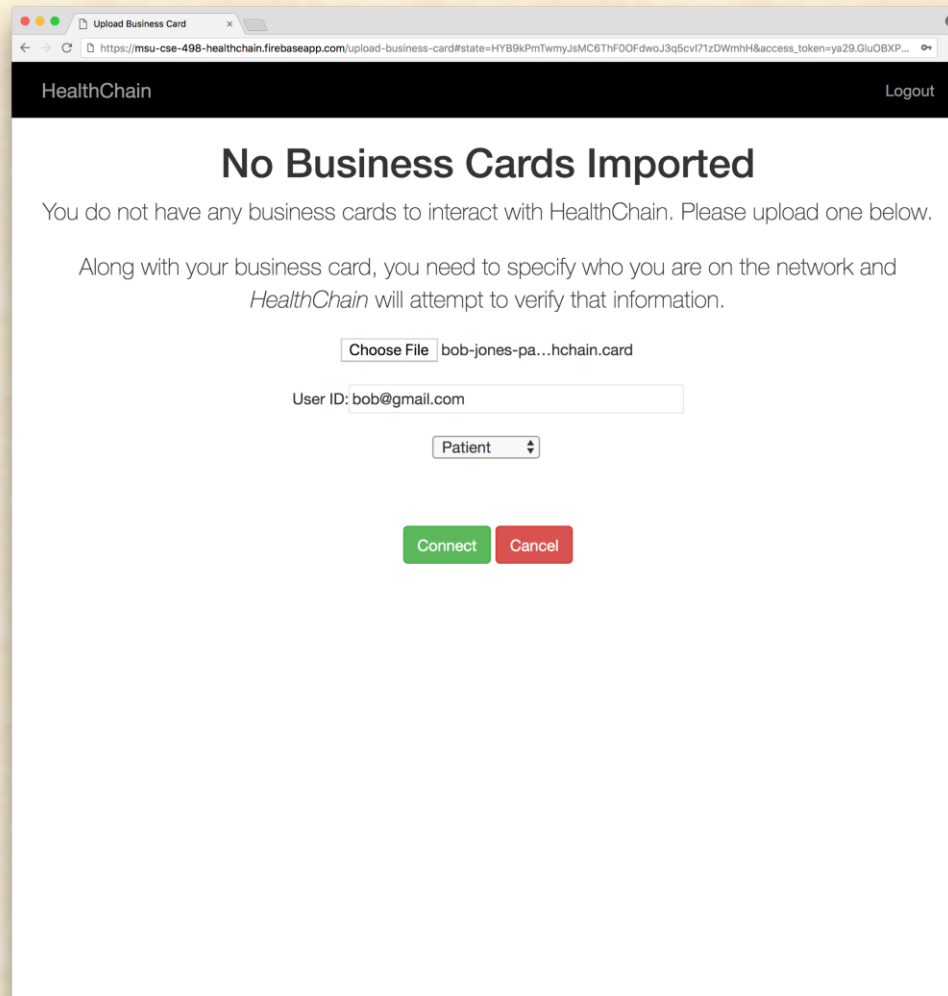
Next Steps
Contact USAA today with your Quote ID to get started
[1-800-531-USAA](tel:1-800-531-USAA)



Dataset Analysis



Upload Business Card



The screenshot shows a web browser window with the title 'Upload Business Card'. The address bar shows a URL from 'msu-cse-498-healthchain.firebaseio.com'. The page has a dark header with 'HealthChain' on the left and 'Logout' on the right. The main content area has a heading 'No Business Cards Imported' and a message: 'You do not have any business cards to interact with HealthChain. Please upload one below.' Below this, it says: 'Along with your business card, you need to specify who you are on the network and HealthChain will attempt to verify that information.' There is a 'Choose File' button next to the text 'bob-jones-pa...hchain.card'. Below that is a text input field for 'User ID' containing 'bob@gmail.com'. Underneath the input field is a dropdown menu currently showing 'Patient'. At the bottom are two buttons: a green 'Connect' button and a red 'Cancel' button.

HealthChain Logout

No Business Cards Imported

You do not have any business cards to interact with HealthChain. Please upload one below.

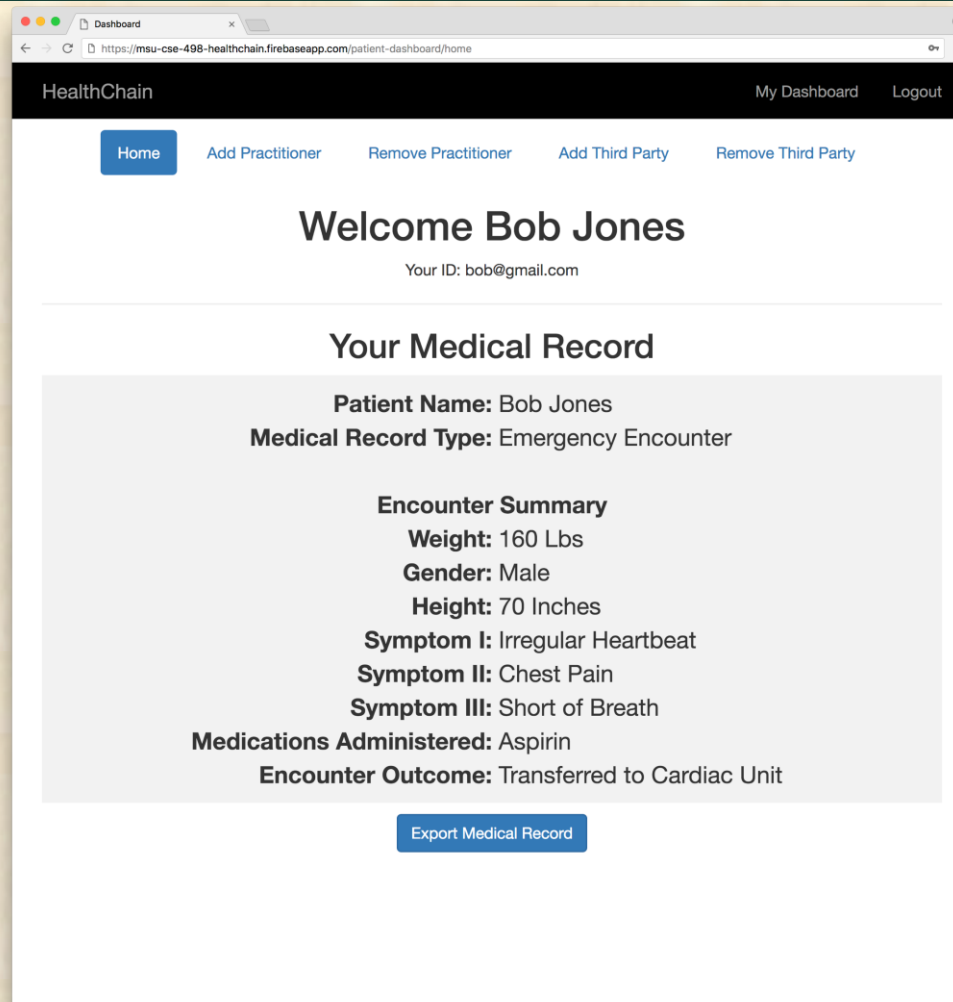
Along with your business card, you need to specify who you are on the network and *HealthChain* will attempt to verify that information.

bob-jones-pa...hchain.card

User ID:



Patient Dashboard - Home



Patient Dashboard – Add Practitioner

The screenshot shows a web browser window with the URL `https://msu-cse-498-healthchain.firebaseio.com/patient-dashboard/authorize-practitioner`. The page has a dark header with 'HealthChain' on the left and 'My Dashboard' and 'Logout' on the right. Below the header is a navigation bar with links: 'Home', 'Add Practitioner' (highlighted in blue), 'Remove Practitioner', 'Add Third Party', and 'Remove Third Party'. The main content area is titled 'Authorize a Practitioner' and includes a sub-header: 'You can search for a practitioner below and click the **Authorize** button to give them access to your medical records.' Below this is a search section with two input fields labeled 'First Name' and 'Last Name'. Underneath the search fields are three practitioner cards. Each card displays the practitioner's name, email address, and an 'Authorize' button.

First Name	Last Name
Dr. Dimitri	Aharoni
dr.Mariel-Bailey	@olin.edu
Authorize	
Dr. Willow	Basketter
dr.Ashley-Zulauf	@olin.edu
Authorize	
Dr. Pat	Bewsy
dr.Glady-Kerluke	@olin.edu
Authorize	



Patient Dashboard – Add Third Party

The screenshot shows a web browser window with the URL `https://msu-cse-498-healthchain.firebaseio.com/patient-dashboard/authorize-third-party`. The page is titled "HealthChain" and has a navigation bar with links: "Home", "Add Practitioner", "Remove Practitioner", "Add Third Party" (highlighted in blue), and "Remove Third Party". There are also links for "My Dashboard" and "Logout" in the top right corner.

The main heading is "Authorize a Third Party". Below it, a text block states: "You can search for a third party below and click the **Authorize** button to give them access to your medical records."

Below the text, there are two input fields labeled "First Name" and "Last Name".

There are three search results, each in a white box with a light gray border:

- Lesley Bellamy**
Delfina-Monahan@weightwatchers.com
Authorize
- Rabi Codner**
Megan-Ziemann@fitbit.com
Authorize
- Molly Cranch**
Leshia-Mills@fitbit.com
Authorize



Patient Dashboard – Revoke Practitioner

The screenshot shows a web browser window with the URL `https://msu-cse-498-healthchain.firebaseio.com/patient-dashboard/revoke-practitioner`. The page is titled "HealthChain" and has a navigation bar with links: "Home", "Add Practitioner", "Remove Practitioner" (highlighted in blue), "Add Third Party", and "Remove Third Party". There are also links for "My Dashboard" and "Logout".

Remove a Practitioner

You can search for a practitioner below and click the **Revoke** button to revoke their access to your medical records.

Search fields: First Name, Last Name

Dr. Madelene Breeze dr.Ethelyn-Adams@olin.edu Revoke
Dr. Inge Carlucci dr.Ahmad-Bechtelar@olin.edu Revoke
Dr. Kris Cattrall dr.Shayna-Walker@olin.edu Revoke



Patient Dashboard – Revoke Third Party

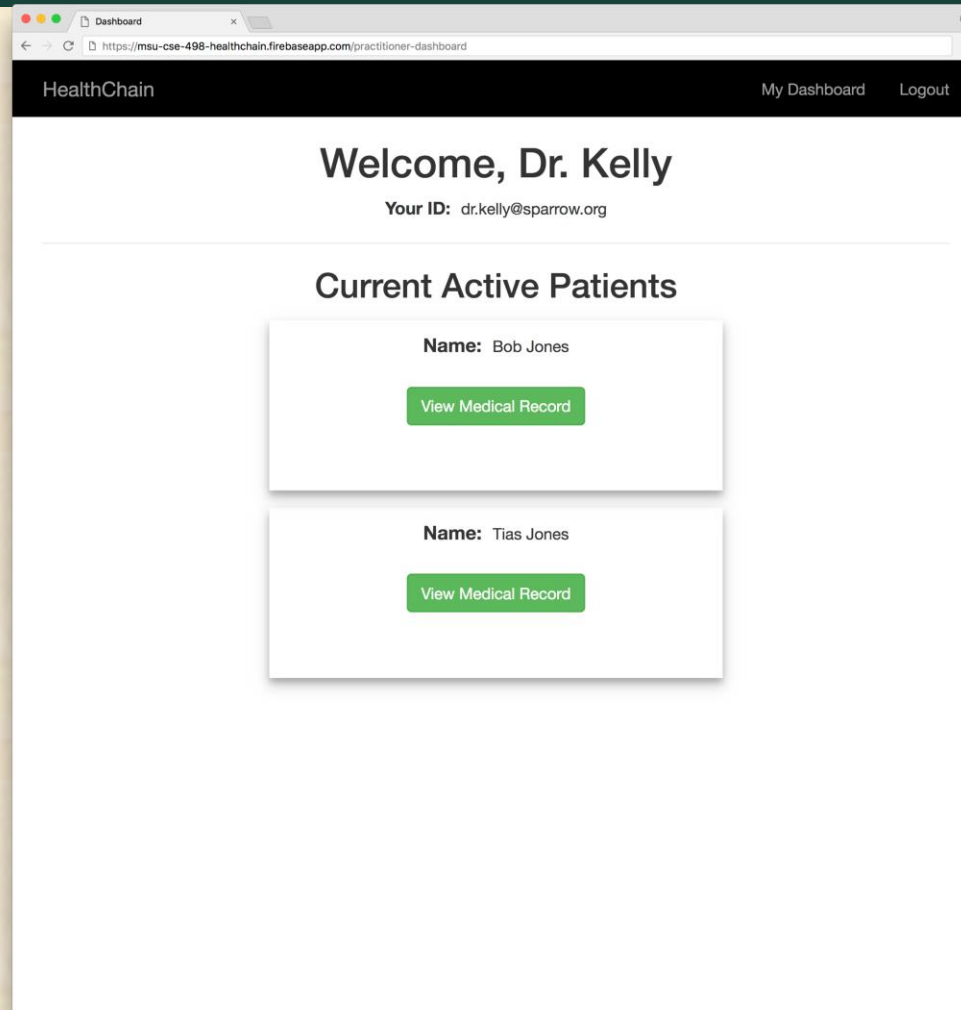
The screenshot shows a web browser window with the URL `https://msu-cse-498-healthchain.firebaseio.com/patient-dashboard/revoke-third-party`. The page title is "HealthChain". The navigation bar includes "Home", "Add Practitioner", "Remove Practitioner", "Add Third Party", and a highlighted "Remove Third Party" button. The main heading is "Remove a Third Party". Below the heading, a message states: "You can search for a third party below and click the **Revoke** button to revoke their access to your medical records."

Below the message, there is a search section with labels "First Name" and "Last Name" above a search input field. Below the search field, there are three cards, each representing a third party with a "Revoke" button:

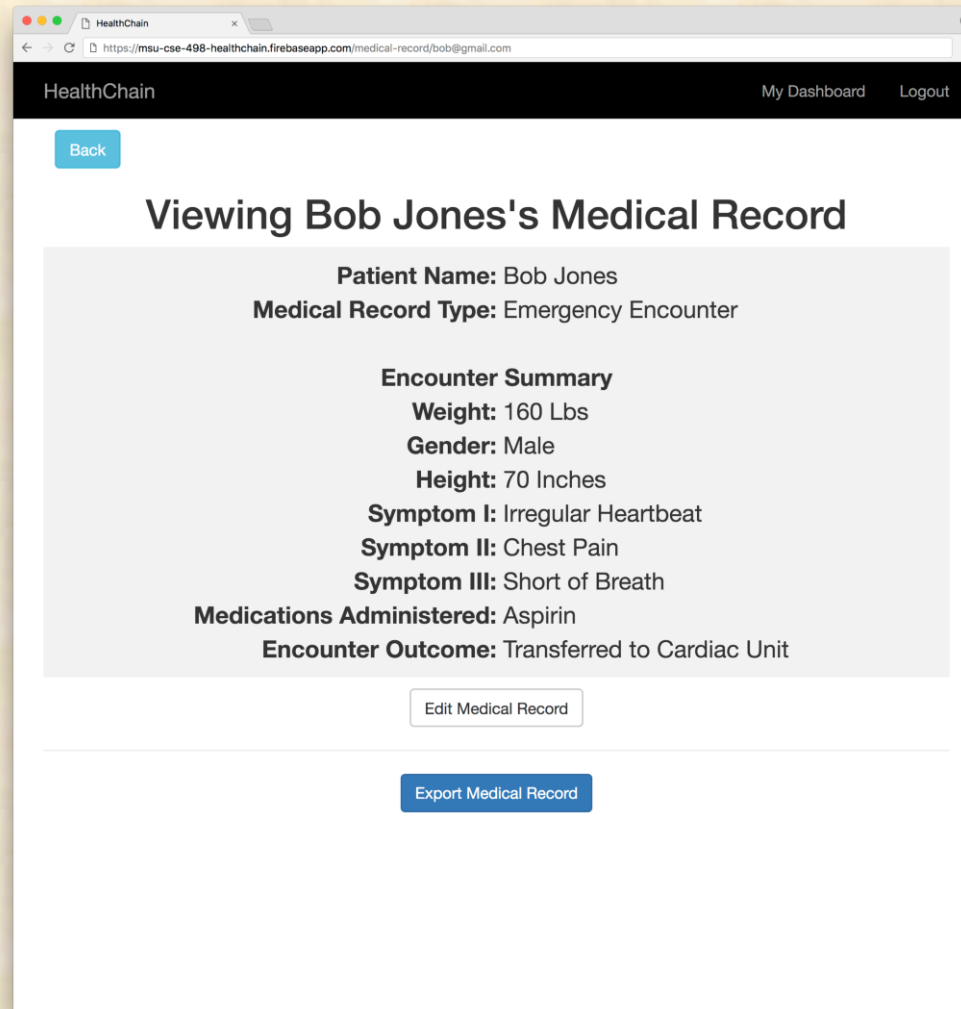
First Name	Last Name
Rudy Ewbank	Roni-Gerlach@fitbit.com
Beverie Fritschel	Stephen-Rice@usaa.com
Corliss Goodbarr	Petronila-Franecki@usaa.com



Practitioner Dashboard



Practitioner View Medical Record



The screenshot shows a web browser window with the address bar displaying "https://msu-cse-498-healthchain.firebaseio.com/medical-record/bob@gmail.com". The page has a dark header with "HealthChain" on the left and "My Dashboard" and "Logout" on the right. Below the header is a "Back" button. The main content area is titled "Viewing Bob Jones's Medical Record". It contains a light gray box with the following information: "Patient Name: Bob Jones", "Medical Record Type: Emergency Encounter", "Encounter Summary" (with sub-items: "Weight: 160 Lbs", "Gender: Male", "Height: 70 Inches", "Symptom I: Irregular Heartbeat", "Symptom II: Chest Pain", "Symptom III: Short of Breath"), "Medications Administered: Aspirin", and "Encounter Outcome: Transferred to Cardiac Unit". Below the gray box is an "Edit Medical Record" button, and at the bottom is an "Export Medical Record" button.

HealthChain My Dashboard Logout

Back

Viewing Bob Jones's Medical Record

Patient Name: Bob Jones
Medical Record Type: Emergency Encounter

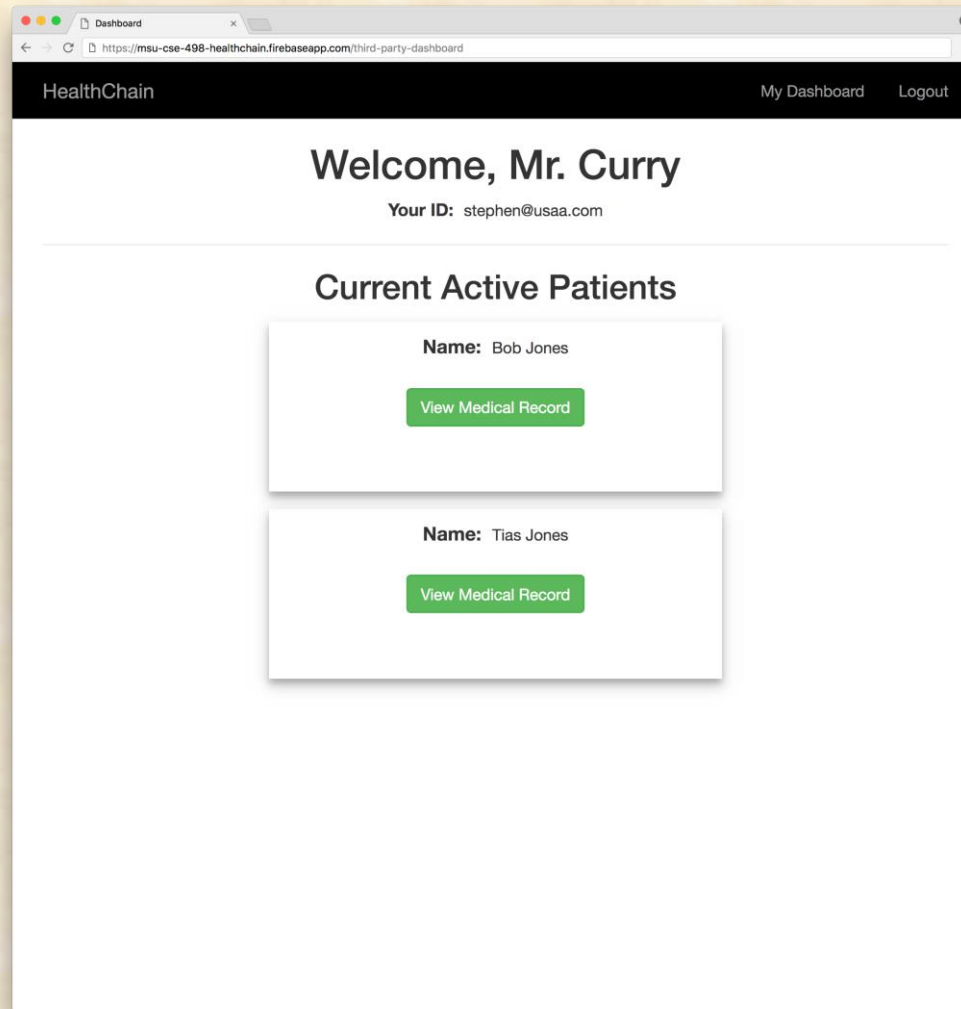
Encounter Summary
Weight: 160 Lbs
Gender: Male
Height: 70 Inches
Symptom I: Irregular Heartbeat
Symptom II: Chest Pain
Symptom III: Short of Breath
Medications Administered: Aspirin
Encounter Outcome: Transferred to Cardiac Unit

Edit Medical Record

Export Medical Record



Third Party Dashboard



What's left to do?

- Implement stretch goal features
 - Practitioner medical record editing on frontend
 - Stepper UI for LIMELight frontend
 - Improve UI for HealthChain
- Determine the upper bound of machine learning performance given the current dataset

Questions?

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