From Students…
…to Professionals

Beta Presentation

LIMElight: Life Insurance Made Easy

The Capstone Experience

Team USAA

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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

Frontend Web Application (Firebase)

React

Blockchain Backend (Google Cloud)

REST API

Hyperledger

Data

Chaincode

Quote Backend (Google Cloud)

REST API

Machine Learning

Data

Result

Response

Request

Form Answers

Quote
Get A Quote

Get A Life Insurance Quote

- Age
- Height: 6 ft 3 in
- Coverage Amount
- Recent Car Accidents
- Recreational Flying

GET A QUOTE
Dataset Analysis

Risk Class 2
46% of Applicants
56% Accuracy

Risk Class 4
39% of Applicants
58% Accuracy
Upload Business Card

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.

Choose File: bob-jones-pa...hchain.card

User ID: bob@gmail.com

Patient

Connect  Cancel
Patient Dashboard - Home

Welcome Bob Jones
Your ID: bob@gmail.com

Your 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

Export Medical Record
Patient Dashboard – Add Practitioner

Authorize a Practitioner

You can search for a practitioner below and click the Authorize button to give them access to your medical records.

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.Gidy-Kerluke@olin.edu

Authorize
Patient Dashboard – Add Third Party

Authorize a Third Party

You can search for a third party below and click the Authorize button to give them access to your medical records.

First Name | Last Name
--- | ---
Lesley Bellamy
Delfina-Monahan@weightwatchers.com
Authorize

Rabi Codner
Megan-Ziemann@fitbit.com
Authorize

Molly Cranch
Lesha-Mills@fitbit.com
Authorize
Patient Dashboard – Revoke Practitioner

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

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

Remove a Third Party
You can search for a third party below and click the **Revoke** button to revoke their access to your medical records.

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Email</th>
<th>Revoke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rudy Ewbank</td>
<td><a href="mailto:Roni-Gerlach@fitbit.com">Roni-Gerlach@fitbit.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beverie Fritschel</td>
<td><a href="mailto:Stephen-Rice@usaa.com">Stephen-Rice@usaa.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corliss Goodbarr</td>
<td><a href="mailto:Petronila-Francck@usaa.com">Petronila-Francck@usaa.com</a></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Practitioner Dashboard

Welcome, Dr. Kelly
Your ID: dr.kelly@sparrow.org

Current Active Patients

Name: Bob Jones
View Medical Record

Name: Tias Jones
View Medical Record
Practitioner View Medical Record

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
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?