



# Jack Richard


## Artificial Intelligence

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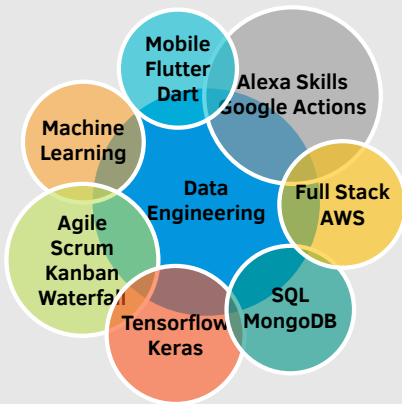
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## Skills

### Overview



### Programming

5000 LOC → 50000 LOC

HTML5 • JS • TS • • High Level

Java • Python • • Object-Oriented

C • Bash • Lisp • • Low Level

## Projects

**RHIT Library CMS** - Designed RHIT library Content Management Server web app with Angular 5

**Patient Home Monitoring** - Case Study partnering with Uppsala University in Sweden.

**Conductor** - App that implements sql database to store gestures identified by Myoband.

**Bodyfacts** - iOS application resembling interactive medical id using Scenokit and Firebase.

## Education

Aug 2018 - Present **MS, Artificial Intelligence**

Northwestern University

Aug 2014 - May 2018 **BS, Computer Science**

Rose-Hulman Institute of Technology

## Research

Aug 2017 - April 2018 **Dynamic Code Morphing**

Rose-Hulman Institute Of Technology

**Topic:** Dynamic Binary Translation for Single-Threaded Speedup

- Proposed a process of dynamically optimizing code at run time for single-threaded applications with DynamoRIO. Simulations provided results show-casing improvements in both IPC and overall cycles to complete a task.

**Tools:** C, DynamoRIO, SniperSim, GEM5, Parsec

Aug 2017 - March 2018 **Lung Nodule Classification**

Rose-Hulman Institute Of Technology

**Topic:** Lung Module Malignancy Prediction using Sequential CT Scans

- Trained convolutional neural network on a data set consisting of two dimensional CT scan slices. Resulting network classified ct scans at 32% error.

**Tools:** Python, R, Tensorflow, Keras, InceptionV3

## Experience

May 2018 - Present **Software Consultant & Software Lead**

LineLeap

- Currently developing consumer and administrative solutions on mobile and web platforms through Angular 6, MongoDB, AWS Services, Flutter and more. Administrative scope incorporates Machine Learning for inventory and consumer optimization for venues.

April 2018 - Sep 2018 **Advanced Engineering & V2X Intern**

Aptiv

- Leading a team of 3, developed SIM2V, a DSRC application for testing of V2X Technology in autonomous vehicles. SIM2V simulated DSRC packets to limit V2X testing requirements to a single host vehicle.

April 2017 - Sept 2017 **Passive Safety Intern**

Delphi E&S

- Developed C application to supplement crash sensor analysis. Application used by forensic engineers to parse sensor data into comprehensive graphics for the events leading up to the crash.

## Affiliations and Awards

Aug 2016 **IEEE Student Member**

Aug 2015 **Delta Sigma Phi Fraternity - Zeta Lambda**

- Delta Sigma Phi Social Director for three years while attending Rose-Hulman Institute Of Technology.
- Recipient of the Rose-Hulman Greek of the Year Award in 2017.

Dec 2016 **Upsilon Pi Epsilon Honor Society**

- Rose-Hulman Chapter President of International Honor Society for the Computing and Information Disciplines