



## PROJECTS

**iRetain** (Ruby on Rails, React.js, Redux) | *Sole Developer*

[live](#) | [github](#)

*Web app that allows users to create and study decks of topical flashcards*

- Created reusable React components for all form types to DRY code base
- Designed and implemented browser-like tab UI from scratch using HTML5 and SASS
- Implemented auto-lookup feature that utilizes Pearson dictionary API to create flashcards
- Augmented app with Chrome extension, allowing cross-domain creation of flashcards while browsing

**Transit PathFinder** (JS, jQuery, CSS, HTML5 Canvas) | *Sole Developer*

[live](#) | [github](#)

*Web app that allows visualization of search algorithms using transit maps*

- Integrated app with transit authority APIs to pull real time data on subway systems
- Developed algorithm to build connected graph from incomplete and inconsistent data sources
- Animation and styling done solely in HTML5 and CSS (no external libraries)

**LiteRail** (Ruby, SQLite3) | *Sole Developer*

[github](#)

*A lite version of Ruby on Rails framework with ActiveRecord, both built from scratch*

- Created object relational mapping to connect user to database without the need to write SQL queries
- Complimented design with single-command-generation of models and controllers from terminal
- Designed dynamic error handling with code snippets and stack trace displayed in browser

**Hemoglobe** (Plethysmography, Android OS, Embedded Systems) | *PM and Engineer*

[demo](#)

*Non-invasive anemia detection using pulse-oximeter-like device and mobile app*

- Designed and implemented filtering and sampling algorithms for PIC microprocessor
- Managed clinicians and engineers including during overseas field trips and clinical studies
- Oversaw development and transfer of project from academic setting to licensing by Robert Bosch GmbH, a multi-national corporation

**ASL Recognition** (Matlab, Artificial Neural Networks) | *Lead Engineer*

[demo](#)

*Designed and implemented an application for the recognition of American Sign Language*

- Responsible for feature definition and extraction, machine learning algorithm selection and training, and overall application architecture
- Achieved accuracy of > 95% in green screen, static character recognition

## LANGUAGES AND TECHNOLOGIES

Javascript	Ruby	Python	Rails	CSS/Sass	jQuery	SQL	HTML5	ReactJS
Redux	Relay	GraphQL	Git	Matlab	RSpec	Mocha	RXJS	Jest

## EDUCATION

<b>App Academy</b>	<b>2016</b>	<b>San Francisco, CA</b>
<b>Johns Hopkins University</b>	<b>2013-2014</b>	<b>Baltimore, MD</b>
M.S.E. in Bioengineering, GPA: 3.9		Development and commercialization of med-tech
<b>University of West Florida</b>	<b>2009-2013</b>	<b>Pensacola, FL</b>
B.S. in Electrical Engineering, GPA: 3.8		Minor in mathematics, focus in pattern recognition

## EMPLOYMENT

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**Full Stack Engineer** **OpenGov, Inc.** **2016 – present**

*Startup transforming the way governments report, forecast, and share financial data*

- Made key contributions to scaling collaborative, cloud-based, budget-building application
- Integrated across the stack, utilizing Rails, React, Relay, GraphQL and other cutting edge tools

**CEO, Cofounder** **Glyscend, Inc.** **2014 – 2016**

*Life science startup developing novel treatment for type 2 diabetes*

- Led diverse team of engineers, clinicians, and scientists from clinical need discovery and napkin sketch through seed funding and preclinical development in 2 year period
- Raised and managed a non-dilutive seed round of \$615K from various sources

**Project Manager** **Johns Hopkins University** **2014 - 2015**

*Managed IP-generating projects' transfer out of academic setting*

- Coordinated teams of engineers and clinicians on a variety of engineering projects
- Co-authored several patents that were eventually licensed by major multinational corporations

**Research Engineer** **University of West Florida** **2012 – 2013**

*Used movement data (actigraphy signals) to classify user activity and estimate energy expenditure*

- Used Matlab to implement various machine learning algorithms to evaluate and accurately rank the effectiveness of 63 different features in classifying exercise behavior
  - Presented results at IEEE Southeast Con 2013 in Jacksonville, FL
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