



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

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 (Photo-plethysmography, Android OS) | *Project Manager*

[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

Python Ruby CSS/SASS JS jQuery SQL HTML Ruby on Rails React.js Git Matlab

EDUCATION

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

EMPLOYMENT

CEO, Cofounder	Glyscend, Inc.	2014 - 2016
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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

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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