

# GAVI RAWSON

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iOS Dev

Web Dev

AR / VR

Electron

OpenCV

Android Dev

Illustrator

Unity

SQL / NoSQL

ROS

## EDUCATION

### COLUMBIA UNIVERSITY

M.S. in Computer Science • Vision, Graphics, Interaction, and Robotics Track • Expected December 2018

### JOHNS HOPKINS UNIVERSITY

B.S. in Computer Science and Cognitive Science • May 2017 • 2 Dean's List Awards

### RELEVANT COURSEWORK

3D User Interfaces and Augmented Reality, User Interfaces and Mobile Applications, Video Game Design, Graphic Design, Computer Graphics, Computer Vision, Machine Learning, Natural Language Processing, Humanoid Robotics.

## EXPERIENCE

### CULTURE SHOCK • CTO • 1/18 - Present

- Manage day-to-day software development and technology operations of a startup working to create a mobile app that allows users to note, discuss, recommend and enjoy TV, books, and podcasts with peers.
- Produced wireframes of 40 screens for initial concept using Adobe CC. Performed user surveys to iterate and optimize user experience.
- Spearheaded development of fullstack application for iOS. Frontend developed with Swift using MVC pattern and modular views. Backend REST API built with MySQL/Flask and communicates with client through JSON.
- Actively recruit and manage new developers to help our team continuously improve the app's capability and functionality.

### COLUMBIA ROBOTICS LAB • Software Engineer • 9/17 - Present

- Implemented website from scratch allowing spinal cord injury patients to interface with robotic arms to accomplish grasping tasks. Built with NodeJS, Express, RequireJS, and Mustache.
- Utilized ROS to write controllers, enabling input devices such as Alexa, sEMG, and binary switch to communicate with the interface.
- Built Unity/ROS system that controls Fetch robot from virtual reality. Worked with Fetch controllers and MoveIt! to solve inverse kinematics problems for gripper and wheel movements.

### APPLE INC. • Software Engineer Intern, Health Special Projects • 6/17 - 8/17

- Extended CareKit to support dynamic activities, encouragements, and reward system, enhancing provider-patient communication.
- Built end-to-end gaze detection app utilizing CoreML. Distributed app to 20 employees and collected data to improve CoreML models.
- Crafted 60-screen storyboard for the Apple Watch + iPhone feature. Structured UX and script to comply with FDA regulation and data collected on customer concern and preference.

### CORRIE HEALTH • Lead iOS Developer • 6/16 - 10/16

- Collaborated on-site with Apple Inc. Presented app to COO Jeff Williams, VP of Health, and Health Special Projects lead.
- Wireframed and programmed first cardiac CareKit app aimed at reducing hospital readmissions.
- Delegated tasks to iOS development team and reviewed all written code before merging.
- Reduced readmission rate to zero for 50 participating patients at the Johns Hopkins Hospital and Bayview Medical Center.

## PROJECTS

### HAT FACTORY GAME • Shared on Github

- Assembled 2D platformer game using libSDL2 C++ bindings and component based architecture.
- Designed character with five abilities, dynamic enemies, and four levels using Adobe Illustrator.

### AR RECIPE ASSISTANT

- Built AR application that guides users through the process of creating a recipe. Deployed on iOS and Android using C#/Unity.
- Through an egocentric AR interface, users can select recipes, view ingredients, watch guided videos, set timers, and take photos.

### MAVI IOS APP • JHU Hackathon

- Built crosswalk and crowd detector app designed to aid blind persons within 48-hour time constraint (Awarded Best Health Project at JHU Hackathon and Top 10 Overall)
- Utilized iOS Client, Flask backend, Haar and Cascading classifiers for crosswalk detection, and Microsoft's Emotion API for crowd and emotion detection.