# **Sumer Goel**

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#### Education

**B.S., Electrical Engineering, UCLA** Cumulative GPA: 3.323/4.0 Year: Junior Graduation Date: June 2017

#### **Relevant Experience**

#### Internship-Microsoft Singapore

I worked with Microsoft Services to develop a Windows Phone 8.1 native application that would organize all the existing offerings so that employees could present them to customers in an efficient manner. The application authenticates users with their Microsoft ID's and retrieves JSON data from a SharePoint site using REST API to store all existing offerings within the native app. A dynamic runtime user interface is then generated and the data is presented to the user. Furthermore, the app works with the Cortana API to enable users to search for offerings and present them to customers in the quickest way possible. The application is currently named "Sela" and is in the process of being deployed on the company portal. This application is written in C# using the .NET framework. A small preview of some of the functions of this application can be found here: https://www.youtube.com/watch?v=2BIIYP1FNKs&feature=youtu.be

#### **IEEE OPS**

Los Angeles CA, September 2014-Present As part of this program, I worked on various electrical engineering and computer science oriented problems. This year long program honed my skills in areas such as circuit design, soldering, coding and working with microcontrollers. The projects often come with a rough specification, leaving us to independently design the hardware and software for the project. One such project involved implementing a Whack-A-Mole machine on a circuit using LED's and switches. This project was the first time we worked with the Teensy 3.1 Microcontroller. Another such project involved building a proximity sensor using IR emitter-receiver along with the Teensy 3.1. Such projects are geared to prepare for the NATCAR project, which I am participating in next year.

### **Research: Howard Hughes Medical Institute (HHMI) Program**

Los Angeles, June 2015 I am currently a research assistant at a lab conducting medical research. I am studying lens-free micro-imaging, which uses illumination techniques to view micro-organisms in blood samples. I am currently learning about 3D CAD-CAM to design the mechanism which holds the image sensor and blood samples in place. I am using software like LabVIEW to set up a dynamic interface that controls the image sensor.

#### **UCLA Super-Mileage Vehicle**

This is a new project that is looking to build a fully functioning electrical powered car within the next academic year. I am contributing to the power-train of this system and will also be writing C++ code for other modules of the car.

#### LAHacks: MusicMan

Within 36 hours, my team and I built a prototype of a MusicMan, a one-man band system that allows the simulation of an entire band for guitarists. This project used LeapMotion and Myo API's to simulate drums and keyboards. HTML5 and JavaScript were used to create a looping platform where multiple audio tracks could be recorded and a band could be simulated. Later on, this project was adapted for a class project, where we designed a very practical drum-kit. A brief video about this project can be found here: https://www.youtube.com/watch?v=yhagATieAco

#### **Internship-IBM Singapore**

As an intern at IBM, I learned about Watson and the design process that goes into building such technology. I looked into further practical applications of technologies such as Watson within Singapore and the complications that arise with attempting to apply such a vast technology in real life in a cost-efficient way. This program also introduced me to the fundamentals of programming by exposing me to sort/search algorithms, data structures etc.

#### **Programming Skills**

**Proficient:** C++, C#, Java, Windows Phone 8.1 Application Development, XAML, JSON, REST, MVVM App Design Familiar: Objective-C, HTML, CSS, iPhone App Development

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Los Angeles, CA September 2013-Present

Singapore, August 2014

Los Angeles, October 2015

## Los Angeles, April 2015

### Singapore, June 2012