

[ Home Address ] [ Phone Number ]

TERRENCE Kuo [E-Mail Address ]

[www.github.com/terrencekuo](http://www.github.com/terrencekuo) [www.terrencekuo.com](http://www.terrencekuo.com)

## Education

Princeton, NJ Princeton University Sept 2013-June 2017

Major: Electrical Engineering, B.S.E (in-major GPA: 3.44)

Certificate (Minor): Computer Science

+ Programming Coursework: Algorithms & Data Structures, Operating Systems, Networks, Computer Vision

EE Coursework: Embedded Systems, IoT, Computer Arch., Circuits, Logic Design, VLSI Design, Signal Processing

## Employment

Firmware Engineer, Intern Stryd (startup) June-Aug 2016

Foot pod ([www.stryd.com](http://www.stryd.com)): Wearable Power Meter For Running

Improved device's battery lifespan by 8% by integrating a fuel gauge sensor and establishing a battery saving state.

Utilized the I2C protocol to implement a device driver for the fuel gauge and used it to create a low power state.

Increased available flash memory by 66% through redesigning the flash data storage system with a

circular buffer

implementation that supported variable-sized records.

Leveraged knowledge in Git, ARM Cortex-M4 architecture, programmed in C using Keil IDE, and debugged using an

Oscilloscope, Multimeter, Memory Analyzer, and JTAG/SWD debugging interface.

Software Developer, Intern Autodesk June-Aug 2015

Tinkercad ([www.tinkercad.com](http://www.tinkercad.com)): online 3D design and printing tool

Integrated multi-touch gestures for 3D workspaces by creating a deterministic finite state machine for HTML events.

Implemented a low-pass and smoothing function to allow for a user-friendly touch experience.

Established remote testing and coding development environment using Docker and bash scripts.

Leveraged knowledge in Full Stack Web development, JavaScript, Git, and debugged using Chrome Developer Tools.

## Software PROJECTS

Personal Website: [www.terrencekuo.com](http://www.terrencekuo.com) (for additional information and projects)

### iOS Meme App

Developed an iOS application using Swift and Objective-C that allows users to easily create and share memes.

Integrated openCV library allowing users to effortlessly apply photo filters and effects.

Incorporated persistent data storage to archive memes. Leveraged caching for recently accessed memes.

Designed RESTful backend server enabling memes to be stored persistently in an online database.

Utilized: Swift, Obj-C, Local Persistent Data, Caching, Cloud Storage, Python, Flask, SQLite, openCV

## Autonomous RC Car + Virtual Driving

Designed and implemented PID speed control for an RC car by constructing a Hall effect circuit to measure speed

and a PWM motor controller circuit to control speed.

Added autonomous driving by constructing an image processing circuit and implementing PID steering control.

Created a virtual driving experience by manufacturing a gimbal mount and creating an iOS app that wirelessly

displays and operates the cameras FOV and direction. The app also remotely controls speed and steering.

- Utilized: C programming, PSOC, Socket (IP/TCP) Programming, O-scope, Multimeter, Arduino, Web & iOS Dev

## Home Automation: Temperature Sensor with Android Interface

- Created an Android App that bit-banged BeagleBones I2C module to read temperature data off the DS1621

digital thermometer sensor and visualized temperature changes.

- Utilized: C programming, BeagleBone Microcontroller, Oscilloscope, Circuit Design, Android Development

## Real-Time Interactive 3D-Graphics Website (<http://interactive-graphics.herokuapp.com>)

- Developed an interactive graphics website using THREE.js to create a 3D workspace with real-time animated 3D

models of crystal lattice structures and robotic parts in which animations and camera views can be manipulated.

Inspired from struggling with visualizing 3D models while taking a materials science class.

- Utilized: Python, Flask, Heroku, JavaScript, AJAX, THREE.js, HTML/CSS, Docker, GIT

Skills

Software: (proficient): C, Python, Swift, Unix, Git (familiar): Java, C++, Go, SQL, Matlab, JavaScript, HTML/CSS