Marcus **Grant**

SOFTWARE DEVELOPER · ELECTRICAL ENGINEER

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Summary

Passionate electrical and software engineer with personal, professional, and academic experience in embedded systems, iOS development, and years of tinkering with computers and electronics. Approaches software development with a full understanding of computing systems from high level software design architectures to how those designs direct transistors on the atomic level. After a trial run in financial analysis it became clear that a technical career in software development, as per my background, would be much more rewarding.

Skills

Languages	C/C++, Objective C, Swift, Python, MATLAB, Bash, x86 & AVR Assembly
Platforms	iOS, OS X, Linux/UNIX, ARM, AVR, Arduino
Dev Software	Xcode, Vim, Git, Atom, AVR-GCC, Bash, SSH, Arduino
Frameworks	RESTKit, AFNetworking, CoreData, Lumberjack, UIKit/CocoaTouch, GCD, Quick, Delegates, Blocks, CloudKit, Parse, Wordpress

Education

Rochester Institute of Technology   *Rochester, NY*

B.S. IN ELECTRICAL & ELECTRONICS ENGINEERING   *Sept. 2008 - Dec. 2015*

- Course focus on embedded systems, and robotics
- Minors in business administration and german language & culture
- 50 weeks of major-specific work experience as per degree requirements (detailed in experiences section)

Flatiron School   *New York, NY*

iOS DEVELOPMENT 12-WEEK FULL-TIME BOOTCAMP   *Jun. 2015 - Aug. 2015*

- Crowd-sourced MTA timing app, (detailed in projects section)
- Several completed labs that taught specific iOS development skills are on github

Experience

Applied Value LLC   *New York, NY, USA*

ANALYST   *Sep. 2014 Jun. 2015*

- Wrote Python programs and Visual Basic scripts to automate the process of scraping finance data to be used for analysis, saving time to analyze and verify important data, and allowed greater time granularity of analysis.
- Performed analysis on said financial data to help create plans to improve client company's operational efficiency.
- Created VBA scripts and interfaces to update email and phone lists of clients and potential clients, drastically reducing the time spent by the sales team to manage their contact lists.
- Performed deep-dive research on companies to determine their potential as a client or investment based on industry technology and market research.

ABB Inc.   *Västerås, Sweden*

EMBEDDED SOFTWARE DEVELOPER INTERN   *Sep. 2012 Mar. 2013*

- Wrote scripts in bash on automation servers to test hardware and robotic environment. Adding old test functionality to their new operating system.
- Added and tested event-driven interrupt routines in C++ and their own proprietary "RAPID" language, to improve safety of pick-place robots on new family of controllers that halt the system if there are safety concerns that it can detect.
- Helped develop libraries in C++ that ported functionality of old controller operating system to a new one that was being released.

Sony Ericsson (Currently Sony Mobile)   *Lund, Sweden*

ELECTRONICS ENGINEER INTERN   *May 2011 Aug. 2011*

- Tested and debugged manufacturing samples of different mobile circuit boards to help team find areas where either the design of the boards could improve or the manufacturing process, which ended in two design revisions.
- Designed and created a regulator testing device that could log voltage regulator transient response under different load conditions, improving the team's ability to quickly diagnose power conditioning problems of engineering sample boards.

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Major Projects

Hub

AN IOS APP THAT ACTS AS A GATEWAY TO ALL YOUR COMMUNICATIONS APPS

- Links to phone app, texting app, e-mail, Facebook, LinkedIn, and twitter.
- Acts as all-in-one communication app for all bookmarked contacts using all the communication methods described above.
- Programmed in Swift, using these frameworks: CoreData, Facebook SDK, STTwitter, AFNetworking, CNContacts, CloudKit, UIKit
- I personally handled the CoreData Stack, models, parsing MTA times, and updating the Parse backend with that information.

SubWaze

APP THAT TRACKS USERS USING THE MTA FOR MORE ACCURATE TIMING

- Tracks users using New York's MTA subway using geo-fences or manual interaction to keep an up-to-date cloud based time table of the MTA's trains.
- Programmed in Objective C, using these frameworks: CoreData, GTFS, Protocol Buffers, Parse, CoreLocation, CoreGraphics, UIKit

Just.Do

A TO-DO LIST MANAGER

- A basic to-do list with sliding table cells and custom animations.
- Made for the purpose of practice with non-standard UIKit views and animations.
- Written in Objective C using UIKit, CoreData, and MCSwipeTableViewCell

Whack-a-Doge

A WHACK-A-MOLE STYLE IOS GAME

- Users advance the games difficulty and background scenes by tapping doge pictures that pop up on screen
- Written in Objective C using SpriteKit

Simultaneous Localization And Mapping (SLAM) Robot

CAPSTONE RESEARCH PROJECT FOR RIT'S MULTI-AGENT BIOROBOTICS LAB (MABL)

- A robot that uses SLAM with a Kalman Filter that could map and localize itself with only time-of-flight sensors(sonar), and dead-reckoning.
- Written in C++ & MATLAB using the AmigoBot robot platform.

Home-Assistant Contributor

OPEN-SOURCE HOME-AUTOMATION CONTRIBUTOR

- Designed, programmed and constructed prototype for a wirelessly controlled power-strip that monitors power consumption of all devices plugged into it.
- Can be used as Home-Assistant sensor, and can be wirelessly be shut-off based on user defined Home-Assistant automation rules.