

# Charles Julian Knight

[charles@rabidaudio.com](mailto:charles@rabidaudio.com)

<http://www.linkedin.com/in/charlesjulianknight>

<http://github.com/rabidaudio>

330 Valley Green Dr.

Atlanta, GA 30342

404 316 3749

## Education

---

Fall 2012 - Spring 2015	B.S. Electrical Engineering	Georgia Institute of Technology
Fall 2009 - Spring 2012	B.A. Dual-Degree Program	Berry College

## Technical skills

---

Software	Familiar with: <ul style="list-style-type: none"><li>• Javascript (Node, Backbone)</li><li>• C/C++/C#</li></ul>	<ul style="list-style-type: none"><li>• Ruby</li><li>• Java (Android)</li></ul>	<ul style="list-style-type: none"><li>• PHP</li><li>• Python</li></ul>
Hardware	Familiar with: <ul style="list-style-type: none"><li>• Atmel AVR microprocessors</li><li>• Embedded C/C++</li></ul>	<ul style="list-style-type: none"><li>• Analog filter design</li><li>• Eagle</li></ul>	<ul style="list-style-type: none"><li>• Linux</li><li>• Multisim</li></ul>

### Projects

#### QuickComments.js

A drop-in comments system for websites. Solo submission for Static Showdown 2015, a 48-hour hackathon for static apps, where it was a finalist. Built comments system, Grunt tasks, documentation, and demo website. Roughly three times faster than Disqus. Site and source code is available: [ss15-team32.divshot.io](http://ss15-team32.divshot.io)

#### Autonomous Hot Air Balloon

Designed a hot air balloon for the Berry College Physics department for purposes of high-altitude experiments; used physical models to calculate dimensions and other parameters to meet budget and project requirements; sewed over 200 yards of ripstop nylon into a 25 ft. wide, 30 ft. tall envelope; learned welding and other metalworking skills creating a burner. More info available at: [phy498c.blogspot.com](http://phy498c.blogspot.com)

#### HapTech Guitar Effects System

Modular DSP effects system which mounts onto a guitar, completed for ECE Senior Design. Designed and built an audio interface for the Beaglebone Black based around the TI TLV320AIC1110, including preamplifier. Prototyped on breadboard, laid out board using Eagle, and soldered surface mount components. Configured Linux distribution and created Device Tree Overlay. Assisted in software system, including DSP, makefiles, and hardware compatibility. Source code, CAD drawings, etc. is available on GitHub.

#### Wki.pe

URL shortener for Wikipedia articles. Started as an early foray into databases. Single-page web app with PHP backend. Learned git, SEO techniques, adaptive HTML5. Brushed up on CSS, jQuery, SQL. Source code is available on GitHub.

#### Car Music Player

Raspberry Pi MP3 player embedded into my dashboard. Wrote player application from scratch in Node.js; wired Arduino I/O board with RS232 interface to Pi; learned Node streams, serial communication.

More projects and information on my blog: <http://rabid.audio/blog>

## Organizations

---

Spring 2014 - Spring 2015

### Startup Exchange

Organizer Student organization to foster entrepreneurship and hacker culture on campus. Co-led the Maker team. Developed and maintained website, taught classes on web development with Ruby on Rails to six students, organized three and attended over a dozen hackathons.

## Employment

---

*May 2015–Present*

### **RabidAudio, Atlanta, Georgia**

*Consultant*

Founded hardware and software development consultancy. Embedded electronics and software development, specializing in IoT and Bluetooth electronics products, pro-audio projects, and full-stack web design.

*May 2014–December 2014*

### **TechJect, Atlanta, Georgia**

*Engineering and Development Intern*

Developed micro-UAV control app in Android; assisted in design of embedded ARM SoC development board; maintained firmware and kernel drivers for custom Android device; optimized autonomous flight code for UAVs; managed collection of Wordpress sites including e-commerce and customer support sites; set up good coding practices on sites.

*Jan 2014–June 2014*

### **GetNotes, Atlanta, Georgia**

*Developer*

Joined an Atlanta Ventures-funded startup during their progress through the Flashpoint accelerator at Georgia Tech. Created and implemented features application independently in a rapid development cycle; patched bugs; advised on technologies and company direction; learned rigorous customer discovery processes.

*Sep 2012–Aug 2013*

### **Norfolk Southern Corporation, Atlanta, Georgia**

*Co-op, Distributed Systems/AIX*

Wrote automation scripts (perl/shell); worked with diagnostic reporting and resource inventory database; helped manage 10,000 sq. ft. datacenter; developed for and trained coworkers in SharePoint; developed application in Visio for visualizing data-center layout; tweaked, deployed, and administered DokuWiki server.

*Aug 2009–April 2012*

### **Berry College Office of Information Technology, Mount Berry, Georgia**

*Student Supervisor, Technical Support Desk*

Provided technical support for faculty, staff, and students via phone, email, and in person; created and managed service requests and directed departmental calls.