

# Charles McClung

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## Summary

I am a motivated Software Engineer seeking employment with a dynamic software development team. I am fluent in C/C++ (and basics of most other C flavors), Java, Python, PHP, Ruby, HTML, JavaScript, and CSS. I have had a passion for web programming since before I even knew what programming really was. This passion for web development grew into a desire to understand the foundation of the websites I was working on. This led me to pursue server and system administrator work. I am experienced in most aspects of system administration (including Unix, Mac, and Windows) and I am always looking for fun, new features or services I can implement into my servers. Recently I have been working in depth with devops technologies such as AWS, Vagrant, Ansible, and Docker. I enjoy the challenge of architecting and managing complex, scalable infrastructures.

## Skills

- HTML, CSS, JS, PHP, MySQL Expert
- Fluent in SQL & NoSQL, C/C++, Java, Python, Ruby, and most common languages
- Confident with many backend and frontend frameworks including: CodeIgniter, Ruby on Rails, Flask, Django, jQuery, React JS, Angular JS, SocketIO, and more!
- Strong understanding of Object Oriented Programming
- Experience and understanding of MVC frameworks
- Extensive Unix Server Experience (mostly Ubuntu & CentOS)
- Windows Server Experience
- Experienced with AWS, Vagrant, Ansible, Docker, DigitalOcean, and other devops technologies
- Confident working with SVN & GIT
- Familiar with MS Office
- Familiar with common IDE's, API's and SDK's
- Agile Development Methodologies
- Library Design
- API Development
- Active Directory Knowledge
- Experienced in most versions of Unix, OSX, and Windows

# Experience

## Autodesk – Software engineer

June 2016 - Present

- Hired on as a full time software engineer after the contract
- Continuing to work in NodeJS, on an enterprise level web platform
- Experience working with various storage solutions:
  - MySQL
  - Redis
  - MongoDB (NoSQL)
  - AWS S3, EFS, RDS/DynamoDB
- Working on flexible UI components, gained experience with:
  - JS ES6
  - React + Redux
  - AngularJS
  - NodeJS + NPM
  - Babel/Browserify/WebPack
  - Google Polymer

## Bowtie – SysAdmin/DevOps contract

May 2016 - Present

- Side contract job with local startup for on-call system support
- Handled emergency system outages
  - Troubleshoot application outages and repair/relaunch affected system(s)
  - Available (nearly) 24/7
- Refactoring and upgrading (ongoing)
  - Helped lead the way to refactor and rebuild the platform architecture
  - Researched, designed, and implemented new AWS architectural solutions
  - Coordinated architecture updates with refactored software and services
  - Configured CI/CD for refactored system with Jenkins, Ansible, Terraform, Docker, etc.
- Application support
  - Also played a small role in supporting the core Ruby on Rails application
  - Fixing bugs and implementing small features
- Gained significant AWS experience with many services
  - IAM, EC2/ECS, S3, VPC, EFS, SQS/SNS, RDS, Route53, Lambda, ElastiCache, CloudFront

**Autodesk – Web Developer contract****March 2016 – June 2016**

- Contract position to rebuild the website for the FormIt product team in Boulder
- Researched, devised, and implemented a new website (including infrastructure) in less than 3 months
- First real “hands on” experience with NodeJS
  - Used NodeJS because other developers were somewhat familiar with JavaScript, but not at all with PHP, Ruby, Python, or other potential web languages. Since this was a contract position, wanted to ensure that *someone* was able to maintain the site.
- Getting familiar with NoSQL (MongoDB)
- Built simple provisioning scripts
  - Using Ansible, created simple provisioning playbooks to create local dev machine(s) using vagrant, and also deploy to AWS EC2 instance(s)

**CFS - Software Engineer / DevOps Engineer****December 2015 – March 2016**

- Supported a large scale auto-repair loan funding application
  - Application was built using Ruby on Rails.
  - Gained extensive knowledge of Ruby and the Rails framework.
  - Heavily focused on security since a significant amount of personal information is required for loan funding decisions.
  - Focus on the usability of the client-side application.
  - Introduced to the basics of React JS when working with the front end of the system.
- Facilitated integrations with CRM/DMS systems
  - Wrote backend libraries and modules to connect and support integrations with external systems such as PipelineDeals and DealerVault..
  - Utilized tools like Zapier to help “connect the dots” between systems.
- Pursued interest in devops opportunities
  - Quickly learned AWS basics, and was able to augment and restructure network and instance configuration(s).
  - Gained even more experience with Ansible, building several different playbooks in use for several different servers.
  - Began exploring Docker and how it can be tied together with Ansible/ AWS for even more seamless deployments.

**Front Range Community College – Taught online PHP web dev course****Spring 2015**

- Used an existing curriculum to teach the basics of web development (HTML, CSS, JS, + PHP & MySQL)
- Had to update specific assignments and assessments that were out of date
- Grading homework assignments and projects
- Mentoring a group of people through their early interests in web development

**IMM - Software Engineer****April 2013 – December 2015**

- Enhanced experience in all aspects of web development.

- Focused mainly in PHP, using CodeIgniter for most frontend websites
- Furthered abilities and understanding of other web related languages such as JavaScript and CSS
- Using new frameworks, Smarty-PHP, Handlebars-JS, Bootstrap-HTML/CSS, among others
- Built many useful tools and API's for internal as well as production use
  - Designed and implemented many PHP class structures to ensure logical flow of larger scale projects.
  - Developed automated scripts to undertake simple and repetitive procedures, to help free up time of employees across the company.
  - Numerous backend API's written to be accessed as AJAX calls from a front-end website or application.
- Learning the business and analytics side of the programming world
  - Collaborated with co-workers to improve SEO performance and amplify analytics data.
  - Helped with many updates and improvements to different internal tracking solutions.

### **Independent Web and Mobile Developer**

**Since 2003**

- Received first domain as a birthday present in August 2003 and have been in love with web development ever since.
- Experienced in almost every aspect of web development. (HTML, CSS, JavaScript, SQL, PHP, etc...)
  - Built many personal web projects from scratch using PHP
  - Strong experience using MVC frameworks with PHP such as CodeIgniter
  - Also used a Python MVC called "Django" to develop dynamic web applications
  - Recently started experimenting with Ruby on Rails applications
- Created several smaller scale applications using different technologies.
  - Worked with several different Python frameworks including Django and Flask
  - Learning more about websockets and their applications with Python Flask Socket-IO
    - Used to create basic web-based multiplayer games like tic-tac-toe and battleship
  - Data mining application written in both Python and Ruby for the experience
- Manage several personal virtual servers using Digital Ocean
  - Configuring server groups for centralized monitoring and management
  - Most experience with Ubuntu distributions, but also familiar with CentOS
  - Expert with LAMP configuration, also some use of nginx and ruby
  - Using one VPS to host Minecraft and Teamspeak servers for friends and family to play games and be social
- Made an iPhone game just for fun after learning more about iOS game development
  - Very simple 2D game using SpriteKit called "Bomb Defender"

### **Boolal Software - Sierra Applied Science**

**2011 - 2013**

- Worked with a partner developing web and mobile apps, as well as mac software.

- We published our app “PicPoc” to the Apple App Store
- We built a Mac Application “SimplePlot” to be an easy spreadsheet and graphing/plotting replacement for Excel
- Gained experience in Objective-C, and iOS development.
- Adding on to Unix system administration experience by managing a Linode (remote server running an Ubuntu distro) to run all web apps and back-end services.
  - Rebuilt entire server

### **System Administrator - University of Colorado at Boulder**

**2009 - 2012**

- Worked in the Communication Department at CU Boulder as a System Administrator for over two years.
- Learned about Active Directory and Windows and Linux (mostly Ubuntu) server configurations.
- Configured back-end servers to provide real-time updated information.
- Developed desktop applications using C# & Objective C.
- Oversaw deployment, configuration and documentation procedures

### **School Projects & Coursework**

**2008 - 2012**

- Developed the mobile applications for Next Big Sound as my senior project
  - Worked with team of peers to transform the Next Big Sound website into a mobile web app as well as native apps for both iPhone and Android
- Worked with a partner for an independent study web app project
  - Built web forum for CU Boulder Computer Science students to help each other out with school or personal projects.
  - Hosted the site on a University server so it can be authenticated with CU credentials
  - Written in PHP using CodeIgniter as the MVC framework
  - Built custom rudimentary file sharing interface for project uploads/downloads
- Took graphics and advanced graphics classes programming in C/C++ and OpenGL
- For a list of all my courses and grades earned, please visit my website ([www.charliemcclung.com](http://www.charliemcclung.com))

## **Education**

### **University of Colorado at Boulder**

**2008 - 2012**

BS from CU Boulder in Computer Science with an emphasis in Software Engineering

CS GPA: 3.425 (Overall GPA: 3.10)