Charles Daniel

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Summary

Skilled Software Engineer with several years of experience in various languages, web technologies, network server development and robotics.

Skill Set

Proficient in:
- Node.js (asynchronous I/O), Python, Perl, bash scripting, gmake, C/C++, Javascript, HTML, Socket.IO, canvas graphics
- TCP/IP Client/Server development (including web server development)
- Django, AppEngine, Apache, CGI, HTTP, SMTP, DHTML, AJAX, CSS, JSON, SQL (Postgres, MySQL, SQLite), NoSQL (Riak, Redis, CouchDB), Memcache, RabbitMQ
- Linux, Mac OS X, UNIX

Experienced with:
- Autonomous Robotics
- Go, Erlang, Objective-C, Java, PHP, Ruby/Rails, Stingray/Zeus, Esper, mod_perl2

Education

Master of Entertainment Technology - Carnegie Mellon University
Master of Science in Computer Science - Penn State University
Bachelor of Science in Computer Science - Penn State University

Professional Experience

8/2015 - Present   Web Engineer   Dramafever
- Python Django Web development and REST based APIs
- Development using Django and MySQL within Docker containers
- Configuring Jenkins for automated django translation jobs
- Managing Code Freeze of the master branch

7/2014 - 8/2015   Web Engineer   Rain Everywhere
- Python Web development and REST based APIs on Google AppEngine
- Writing front-end AngularJS based Single Page Apps
- Creating Amazon AWS AMIs, setting up AWS instances
- Developing an SDK for various languages to interface with a REST API

8/2010 - 7/2014   Web Engineer   OmniTI
- Developed Python web services with Tornado and RabbitMQ
- Designed and developed backend Node.js based REST API services for iPhone and

Android apps
- Integrated with the Facebook GraphAPI
- Implemented Push notification servers for both iOS (APNS) and Android (C2DM)
- Wrote pre-commit hooks for Riak in Erlang
- Designed and developed the backend and frontend (including database design) of various websites and portals for the company's clients.
- Developed an iPhone application using Appcelerator.
- Adding functionality to Jetty based Java services

5/2007 - 8/2008   Software Engineer   Principia Partners LLC
- Designed and developed a clustered client/server software for the nightly regression testing and reporting of the company's flagship product.
- Reworked and developed the company's public facing case management website and integrated it with Salesforce as the database backend.

5/1999 - 5/2007   Senior Software Engineer   Webclients.net/Valueclick.com
- Designed and developed several custom written multi-threaded C++ based Application Servers for middle tier database integration, payout/billing statistics analysis and streamlining of public facing web based systems.
- Designed and developed a Perl/Javascript pipeline framework for the automatic creation, rotation and feed of lead collecting web advertisements placed on over 200 Webclients web properties.
- Developed Perl modules for various tasks including: United States Postal Service address parsing and verification, web CGI parameter scrambling, mass emailing and credit card encryption.

1/1996 - 8/1998   Computer Technician   Penn State University
- Repaired and maintained Penn State University computer lab equipment

Projects
1/2010 - 5/2010   Motion Control Time-Lapse Robot Camera Rig
                     http://www.etc.cmu.edu/projects/camera/
- Helped design and build an eight foot tall robotic arm with five degrees of freedom (including a dolly locomotion on a track).
- Developed all the software including the robotic control and the user interface for programming animated motions of the robot arm as well as integrating with a Canon 4D DSLR camera to take high quality images.
- Developed GPU accelerated GLSL based live compositing software.
- Developed Maya virtual camera rig control which mirrored the live robot rig and used the same UI.

8/2009 - 12/2009   Bat-teK (Lockheed Martin Robot Recon Project)
- Integrated various disparate technologies (including camera-equipped robotic rovers, a camera-equipped robotic blimp, webcams, iPhones and a Microsoft Surface table) into a single collaborative environment for the purpose of reconnaissance gathering.
- Developed iPhone software to remotely control the robot rovers and blimp while streaming their video feeds to the display.
- Developed the multi-touch node based interface for the arbitrary pipelining and integrating of gathered data, including video feeds, sonar data and GPS, on the

Microsoft Surface table.

1/2009 - 5/2009   GirlTech: Robotic Painter (Pitt Children's Museum)
- ○ Developed software to control a small robotic arm which can use real paint to replicate a child's drawing input from a touchscreen.
- ○ Taught high school girls basic programming in Python and helped them develop a tic-tac-toe playing robot arm.