Jamie Sparks

Skills

- Ability to work well and lead a team
- Software development utilizing an Enterprise Service Bus framework and Service Oriented Architecture
- Programming in Linux using Linux terminal commands and editors (5+ years)
- Efficient at debugging and solving software/code errors (Stack traces)
- Windows OS/API (knowledgeable of Windows specific functions/data types etc.) (15 years of Windows usage)
- Designing/Developing web applications utilizing a database such as: postgreSQL
- Experience using Git, Bitbucket, Mercurial (hg) and Subversion
- Programming in various languages, including Java, C#, C, C++, X86/68K Assembly, BASH Shell Scripting, Python, Ruby, Ruby on Rails
- Proficient in Web technologies including ASP.NET, PHP, X/HTML, XML, CSS, JQuery, Django, SOAP + WSDL, JSON notation
- Development experience in Java technologies including Maven, Spring, ROO, Hibernate, Tomcat, Jetty, Mule
- Development experience in database technologies including SQL Server 2008, SQLite, MYSQL, postgreSQL
- In-depth knowledge of the 802.11 wireless protocol
- Network programming and network fundamentals
- Troubleshooting general computer/network related problems
- Using bug tracking (trac) integrated SCM & Project Management software
- Setup/Deployed/Used Jenkins CI (Continuous Integration) software
- Utilized JUnit/PhpUnit to write test cases for related projects
- Utilized Linux Valgrind to profile code for memory leaks and efficiency
- Ability to utilize memcache/APC properly to improve backend system performance

Professional Project Experience

National Resources Canada **Title: Programmer** **Sept 2012 to Dec 2012**

- Worked on a team developing an Android application based solution to a Geographical Information System problem
- Created database schemas/interfaced with SQL database
- Worked on implementing UI concept into Android application

Children's Hospital of Eastern Ontario **Title: Programmer** **Q1 2012**

- Worked with the backend python web framework, Django
- Implemented new user interface forms using JavaScript, HTML and CSS
- Provided assistance to other programmers to facilitate development process

DawnSuite/EventDawn **Title: Programmer** **Q3 2012**

Event Management System

- Worked on developing a content management system in Ruby on Rails
- Implemented UI concepts into the website front-end using HTML/CSS/JQuery

Algonquin College Office of Applied Research **March 2013 to Oct 2013**
vKey Management Console Project **Title: Student Researcher/Developer**

- Designed and developed a Java software solution utilizing an ESB (Enterprise Server Bus) implementation following Agile development methodologies – including SCRUM
- Modified the on-device Linux boot process to include custom elements
- Developed a management console software system to control electronic devices (usb keys)
- Architected back-end message management solution using Spring Integration
- Developed use cases for the system using object oriented design principles
- Wrote Java code following object oriented principles
- Worked closely with designers and design experts to design the UI for the management console
- Used a sub versioning system (GitLab) to manage the codebase and a dependency manager (Maven)

Trustifi **Title: Junior Full-Stack Developer** **July 22 2013 – Nov 2014**

- This software solution would store and Postmark (using NIST timestamps) and Track Email for clients. The client can buy tokens and use them to send email. They could also store email in a tree directory of folders for posterity. Tracking was used to retain information on email: when it was open, how many times it was opened, which device opened it, etc.
- Used the Postmarking Email/Mass Emailing system in ~4 months, with no comments/documentation and added comments to sections of code, when required
- Used Google 2-factor authentication to authenticate with system
- 24/7 tech support (consisting of: testing/development/migration), receiving notifications using AWS SNS email/phone text alerts. Debugged (using Linux GDB) major errors occurring within Apache (web container) throughout the day
- Performed testing on website and reported bugs/issues on Trac (bug tracking software)
- Used PHP, JQuery, Bash, mySQL, WSDL, SOAP, PHPPerfmonitor, XHR requests to further develop the software solution. OS: Linux, Windows, Mac (for testing website)
- Performed full-site cross-browser testing using: Chrome, Firefox, Firefox Developer, Opera, IE 7/8/9/10, Safari, Safari Mobile, Dolphin (Android), Firefox (Android), Chrome (Android)
- Used Amazon AWS hypervisor instances and created a new CI testing environment. Used small instances with swap enabled and added Linux performance improvements to run the software solution
- Performed migration to production through the environments (dev->testing->staging->production) using SVN. Updated/Ran new database schemas which used the database sharding technique (distributed tables to share load among separate database server instances)
- Setup and deployed Jenkins CI (Continuous Integration) software to run PHPUnit tests (I wrote majority of test cases) every time new/updated code was committed to subversion
- Setup basic PHP Yodlee functionality to accept payments for certain banks
- Used Amazon AWS EC2 Management Console (S3 ephemeral buckets, AWS architecture, RDB, Cloudfront, EC2 Load balancing, CloudWatch, SES, SQS, SNS, Auto scaling, availability zones). Used to store data blobs, manage the backend database, load balance web/app servers, watch/analyze I/O graphs of website performance, send emails about system status/errors, send messages/emails to the queue to be processed by certain system components, send email/text notifications about system status to developers, horizontally scaled server instances to handle multitudes of client connections and setup server instances in different parts of the world to provide better website performance for clients
- Utilized 2 types of caching (APC (storing text blobs), Memcache (storing data objects))
- Upgraded environments with new security updates to fix flaws with the website and AWS instances, to protect from outside attacks

Entrepreneurship **January 2015 – November 2016**

Camcast.it **Title: Developer/Architect/Designer** **Jan 2015 – June 2015**

- Live streaming project that allowed anyone to broadcast video online, utilizing a dynamic UI/live streamer search
- Outlined all the projects requirements (hardware and software)
- Outlined customer, functional/non-functional and core functionality requirements
- Researched information about architecting content streaming backend (PHP, JSON/XML/XHR)
- Designed the software architecture backend for content streaming
- Designed the UI and outlined its behavior
- Programmed a functional website (JQuery, HTML, CSS) and accompanying Android mobile app (Java) prototype
- Tested the system to rid it of issues/defects
- Deployed the website on a test environment (remote virtualized server), providing support/maintenance
- Created rudimentary business model and attempted to monetize, acquire funding for project
- Created slideshow presentation to present in front of potential investors/entrepreneurs
- Created business cards to hand out for advertising/marketing purposes
- Presented elevator speech in front of potential investors/entrepreneurs at funding event

Twitch.tv **Title: Live Streamer/Developer** **Sept 2015 – March 2016**

- Created a live streaming channel game that teaches users how to use Linux terminal commands by breaking out (crashes/exploits) of a limited shell. The point of the project is for users to collaboratively "break" Linux in various different ways, watching it happen live. By typing a command that "breaks" Linux, that user will win the game. Link: twitch.tv/LearnLinuxLive
- Programming/scripting: C, Bash, Linux commands
- Architected/designed the project in a virtual (hypervisor) environment
- Utilized 2 different versions of Linux, Ubuntu and Lubuntu (lightweight)
- A group of Twitch users have already won the game, which is logged on the channel
- Attempted to monetize the channel

SasS Canvas Notes (WIP/NDA) Title: Developer/Architect/Designer **April 2016 – June 2016**

- Dynamic note taking web application that incorporates the following: drag and drop, low price point, dynamic UI, timed notes, note reminder, sticky notes, password protected/shared notes, export notes to pdf/doc/csv, embed images/videos into notes, tasks, to-do list etc
- Outlined projects requirements (hardware/software) for client/server architecture
- Designed the UI and outlined its behavior
- Outlined customer, functional/non-functional and core functionality requirements
- Created rudimentary business model and attempted to monetize
- Languages/Protocols used: PHP, JQuery, HTML, CSS, JSON, XHR

IntelliShopper (WIP/NDA) **Title: Developer/Architect/Designer** **Sept 2016 – Nov 2016**

- Android application used to facilitate the process of purchasing products at various retail locations, by allowing the consumer to make an informed decision prior to purchase. Scan the products bar code (or input it manually), display products average customer review rating, display all stores that sell the item with reviews/average rating and allow customer to purchase it via the app or in person
- Outlined projects requirements (hardware/software) for client/server architecture

- Designed the UI and outlined its behavior
- Outlined customer, functional/non-functional and core functionality requirements
- Created rudimentary business model and attempted to monetize
- Languages/Protocols used: Java, JSON, C, NodeJS

Academic Projects

Lord of the Rings Battlefield Simulator Game (Java Programming)

- Used Java to create Lord of the Rings simulator game
- Wrote documentation, designed the algorithm, created memory map and code for final submission

Communication Project: Digital Television

- Researched information about how digital televisions worked
- Gathered information from the internet and books
- Prepared the final report
- Presented the report in front of the teacher and peers

Web Development

- Used C# to create an ASP website
- Leveraged Windows Presentation Foundation technologies during implementation
- Languages used: JQuery/HTML/CSS/JSP/JSF/Primefaces

QNX (Real Time Operating System)

- Created multithreaded applications in C
- Worked with the QNX API and emulator
- Used the QNX operating system internals

Volunteer Experience

July, August 2006 (120hrs) – Adventures in Engineering & Science Summer Day Camp
(Ottawa University)

Volunteer Assistant Instructor

- Prepared computer/science materials for the instructors
- Developed science projects
- Developed HTML/CSS solution

Special Accomplishments

- June 2007 – Outstanding Achievement: Computer Science ICS3M
  John McCrae Secondary School

- June 2008 – Outstanding Achievement: Computer and Information Science ICS4M
  John McCrae Secondary School

Further Accomplishments

- Late 2013 – Built a mini-ATX with a colleague
- Late 2015-2016 Typeracing (play.typeracer.com)
  - 2 personas (accounts), one for blue switches and red switches
  - Oyhr_fjvgpurf (rot13 of blue switches) 72WPM AVG, 96WPM Best Race, 87.1%, Typist 5
  - April_maye (random) 69WPM AVG, 100WPM Best Race – 110WPM, 84.7%, Typist 6
- Dec 2016 – Built my computer system comprised of the following:

- Fractal Design R5 White Window Case (Mid Tower, ATX)
- Asus Nvidia GTX 1070 OC
- Supernova G2 750W PSU
- G-Skill Ripjaws V 32GB (4x8 Quad-Channel) 3200Mhz
- Asus X99-A II Motherboard
- Be Quiet! Dark Rock Pro 3 CPU Tower Cooler
- Intel 6800k CPU Unlocked
- Samsung EVO 250GB V-NAND SSD
- Western Digital 1TB Blue HDD
- Asus VE278Q 27" 60hz TN Monitor
- Asus PG348Q 34" 3440x1440 IPS 100hz G-Sync Curved Monitor
- Asus PG279Q 27" 3440x1440 IPS 165hz (OC) G-Sync Monitor
- Corsair Strafe RGB Red Silent Switches (Gaming/Streaming)
- Ducky Shine 5 RGB Blue Switches (Programming/Typing)

Education

Algonquin College of Applied Arts and Technology, Ottawa 2009-2012

- Computer Engineering Technology – Computing Science with Co-Op
- Advanced Diploma Program, Dean's List