

Christopher T. Hull  
(415) 385-4865; Santa Clara, Sunnyvale CA; employment@chrishull.com  
Project Manager, Tech lead, Sr Developer  
(resume updated 4/14/2024)

## Objective

Seeking a leadership role in software product design and development. My most recent development activities have involved Java based back-end and cloud development using a traditional Springboot - JPA stack. The microservices were run on AWS and Azure. The back ends run Mongo and Oracle. I have also been developing an app using Swift and Kotlin.

Click for skills matrix; <http://faq.chrishull.com/skills.html>

## Experience Summary

I am an industry veteran possessing over thirty-five years experience developing for a number of platforms. I've designed commercial software under MacOS, Windows and Linux. Contributed to high profile projects at Apple Computer - MacOS System 7, Netscape Communications - Navigator, Amazon/Lab126 - Kindle, and NASA - Tess. Primary contributor to a patent on the Kindle - see patents. My code is in use by millions of users worldwide and has been for decades.

I'm proficient in Java, Python Swift Kotlin BASH. More distantly C/C++ and various assembly languages. Developed code using all the usual IDEs, GNU toolchain, Linux and many other platforms over the years.

I have managed small teams and have served as an effective liaison between product development and engineering. I write clean and understandable documentation. I take it as my mission to keep stakeholders informed.

I run my own private garage cloud based on CentOS Linux and manage it using tools such as KVM and Git for source code control and deployment. I use it to house my personal development server stack consisting of web/mail, Jekyll, Git, GitLab (for code reviews), and a robust NAS as a backbone. My external websites and e mail lives there too. Like many in the valley I have several domain names including my own, chrishull.com.

**Platforms and Languages** (see skills matrix at <http://faq.chrishull.com/skills.html> for all details)

Linux, Java/J2EE, Java 8, Python, iOS / Swift, Arduino, PIC Micro, C/C++, BASH, PHP, some Node.js, various assembly languages, Perl, Postscript, Pascal, Forth, Ruby (Rails), Virtualization

### Development Environments and Tools

Bash, Linux, Eclipse, XCode, IntelliJ, Android Studio, Git / Github, SVN, CVS, Perforce, Jenkins, Gradle, Maven, OSGi

### Backend / Server / Cloud Related

Apache, Azure, Cosmos, JMS(ActiveMQ), Flask, Tomcat, REST, Hibernate / Springboot, Microservices, Kubernetes, SQL, NoSQL, JSON, XML. **many more, see skills matrix.**

## Recent Projects:

### GatherZone / OurHangouts - Jan 2020 - Present

*Skills used: Swift, Kotlin, Node.js, Git, Springboot Hibernate NoSQL, SQL, Microservices etc.*

For the past few years I've been working on a new social platform consisting of an app for iPhone and Android and a back-end running on Heroku and MongoDB. The skills used to develop this platform were acquired over the past several years and reflect a broad knowledge of cloud

computing, product design, software development and many other relevant skills. You can see the completed product here. <https://gatherzone.app>

## **Work History:**

### **McKesson Ontada - March 2020 - August 2023**

Skills used: Java/j2EE, Java 11,17, Git, NoSQL, SQL, Microservices, SpringBoot, AWS, Docker, Kubernetes, Solution Appliance

McKesson is developing and maintaining an EHR (electronic health record) and medical practice database and service consisting of a web portal and application for iOS.

I was hired as a part of a new team to help rebuild key components of this system. As part of my work, I had been developing a cross platform blob storage system which works with both local file storage for our datacenter, and Amazon S3 as part of our migration over to AWS. I've also developed various microservices based on a platform called Solution Appliance which provide patient data to the front end.

Using the traditional Springboot - Hibernate stack, I designed and developed a substantial API to support our EHR and interacted with the Mobile Team on a daily basis. I produced PostMan scripts and documentation to allow the iPhone to interact with the EHR. I think my microservice had about 55 endpoints handling everything from authentication to patient charts to appointment scheduling. Our EHR's focus was oncology.

I also worked daily with product development to insure physician desired features were included in when planning our sprints.

The blob storage system I developed was capable of storing large files up to a couple of petabytes if the actual storage was available. It did this by splitting files up into segments (multipart upload).

Our team of 26 was laid off in August 2023. I really miss this place. Several great references available. Please ask.

### **Walmart Labs - October 2018 - November 2019**

Skills used: Java/j2EE, Java 8, Git, NoSQL, SQL, Microservices, REST, SpringBoot, Azure, Redis Cache, Cosmos DB

My first task was the development of a new Catalog engine based on Microsoft Azure and Java8 / Springboot. We are rewriting the entire retail platform and I started the Catalog system from the ground up. I also developed an Address Verification Service based on SpringBoot, running on Azure, using Cosmos DB. This is a full complete Springboot app running on Azure, developed by myself.

My most recent position involves documenting an existing codebase and adapting it to work with Azure. I was offered a full time position with the company, but would have to move to Bentonville AR. As it stands, my contract my end November first.

About Walmart's corporate culture. I've been here a few months and I have to say that Walmart is a wonderful place to work. Work / life balance is good. Walmart is right up there with Cisco and Cypress as far as human friendly environments goes.

### **Apple - March 2018 - August 2018 (contract)**

Skills used: Java/j2EE, Java 8, Git, NoSQL FoundationDB, SQL, Microservices, REST (JAX-RS Jersey), Spring Batch, Web Services (DropWizard)

Worked with the iTunes team on a database migration project. We are moving the current backend to Foundation DB, an OpenSource NoSQL database which Apple owns. Our architecture is Microservices based, using JAX-RS (based on Jersey)

#### **Cypress Semiconductor - November 2017 - February 2018 (contract to hire)**

Skills used: Java/j2EE, Java 8, Eclipse Plugin Development (PDE), Git, RCPTT (Eclipse Rich Client Platform Testing Tool)

I was hired to assist the Oregon Cypress team in creating a development environment for the companies PSoC and WICED series of microcontrollers. This involved Java and the use of Eclipse internals (the Eclipse Plugin Development Environment and SWT). I created the New Project Wizard using SWT. I also developed a very simple JABX based object store.

Although I was on a contract to hire, three months into my employment, a company realignment took place and several contracts, including mine, were abruptly terminated.

#### **NASA Ames Research Center - TESS Mission - May 2016 - August 2017 (contract)**

Skills used: Java/j2EE, Java 8, Python, Git, SVN, Agile/Scrum, Hibernate, FITS (an astronomical file format)

As a member of the Science Pipeline Operations Center (SPOC), I am tasked with adapting code used in the Kepler space telescope mission to work with the upcoming TESS mission. You can read about TESS via google. I worked on a Python based user interface known as the SPOCOPS GUI. I am the lead engineer on the Archiver (AR) portion of the pipeline.

The Archiver receives all data involved in planet searches (light curves, transit data, full field star images and the like) and uses it to generate a variety of files used for analysis by NASA, MIT and the public. This task involves a great deal of data marshaling and adaptation for use by the astronomical community. The results of this work will be publicly available when the mission takes place. There is a lot of detail work in the Archiver.

TESS is scheduled to launch in March of 2018. I am very proud to be a part of this mission. Space exploration is a life long passion of mine. Our work on the software ends in August or September.

#### **Cisco Systems - September 15 2014 – March 5 2016 (contract)**

Skills used: Java/J2EE, Python, Flask, Git, Openstack, Hibernate, Tomcat, Jersey, REST, Cloud development, Virtualization, Agile/Scrum, VMWare, Node.js, SVN

I worked with a team in Ottawa Canada on a project called the Elastic Services Controller. ESC is an appliance designed to scale and monitor services running in an Openstack and/or VMWare cloud. I developed parts of ESC's REST interface and implemented authentication for REST. I also developed many tests as the product evolved in order to assist QA in automation. ESC is an important tool for maintaining cloud infrastructures and services. Google Cisco ESC.

Also worked on the Cisco MOS video project developing a REST backend. I also developed several Continuous Integration / QA tests for portions of the MOS Platform.

This work was done thru Cisco Canada. They consolidated and ended contracts in the US.

#### **DirectTV June 3 2013 – December 3 2013 (contract)**

Skills used: Java/J2EE, Mercurial, Eclipse, CVS, Git, BASH, Python, Chef, Linux, Build and deploy system development

At DirecTV I developed a simple tool which allowed us to diagnose problems with the set top box advertisement system. Some of this code was also used as part of the ad system in the set top box itself. I also diagnosed and fixed bugs related to the set top box's "Cloud VOD" (internet based video on demand) system. I documented and wrote scripts for our rather complex checkout, build, and deploy system as a side project along with a co-worker. This greatly improved the development process, but my contract ended before it could be completed.

DirecTV suddenly closed their offices in Cupertino, California, thus cutting my time short there. I was offered an opportunity to work for them in Los Angeles, but declined.

#### **LinMin June 2010 – November 2012 (one of the founders of this Linux startup)**

Skills used: Java/J2EE, Eclipse, PHP, Python, Perl, BASH, Cisco, Servers, Virtualization, Linux

LinMin is a software company that creates provisioning software that runs on CentOS / RHEL based systems. Provisioning software allows you to install operating systems and other software in an unattended fashion on thousands of servers on a local area network. LinMin is a small company so I performed many different functions while there. I did a great deal of QA, setting up virtual clouds so that I could simulate banks of servers and provision them.

I wrote automated test tools in object oriented PHP, which accessed the LinMin API and tested the code. This PHP layer can also serve as a basis for our eventual GUI rewrite.

Worked at Cisco and learned to use UCS Manager, a very complex hardware configuration tool developed by Cisco which allows you to configure the BIOS on banks of servers.

I migrated the LinMin Java code base from 1.4.2 to 1.5 so that I could integrate the Jakarta Commons multithreaded TFTP server into our product.

#### **Lab126 (an Amazon company) June 2007 – May 2010 (full time)**

Skills used: Java/J2EE, embedded Java, C/C++, Eclipse, BASH, J-Tag, embedded Linux, Linux, Agile/Scrum, JNI

Lab126 develops the hardware and software for the Kindle ebook reader.

I worked on the Framework for the device. As a part of this work I developed a rudimentary windowing system, allowing the Kindle II and its successors to have a more complex user interface than the first Kindle. I also wrote some of the power management code, event manager, and miscellaneous other parts. Visible components of the Kindle that I worked on include the screen saver, USB network screen, and others which will be mentioned upon release. I was the primary contributor on a patent for the windowing system.

#### **Shopping.com (an eBay Company) December 2005 – June 2007 (full time)**

Skills used: C/C++, Java, J2EE, Tomcat, Perforce, Linux, Tapestry, Spring, Hibernate, Ruby on Rails, JBoss, ActiveMQ, JMS

While at Shopping.com I helped maintain the merchant feeds system. This position involves Java code running JMS queues and interacting with SQL. I have also done some front end work in Tapestry.

I also developed code in C using ImageMagick to display images on the website. This code allows Shopping.com to store images of items for sale in a single small size, and resize them at high speed, on the fly for display.

**Altera, Santa Cruz CA. March 2005 – December 2005 (full time)**

Skills used: C/C++, Java, J2EE, Eclipse, Perforce, Linux.

Designed and implemented a set of Eclipse plug-ins for Altera's Nios II soft processor. Nios II is a virtual CPU that runs on Altera's Stratix FPGA.

**OpenCountry, Menlo Park CA. December 2002 – February 2005 (full time startup)**

Skills used: C/C++, Java, J2EE, BASH, Perl, gmake, gcc, gpp, CVS, PHP, Linux, SOAP, MySQL

Responsible for gathering requirements, designing, and developing OpenCountry's OC-Provision product. OC-Provision allows any Linux machine to be used as a PXE installation server. OC-Provision will run on all RedHat based distributions and will install all RedHat and SUSE based distributions on any PXE capable machine. Currently I support a total of twelve forms of Linux.

Also developed a Linux based management tool. This tool allows administrators to easily and quickly keep large numbers of Linux nodes, such as routers, switches, and user machines, updated with the latest software. It is divided into two components: OCHost, and OCAgent. The Agent is a tiny, powerful piece of code that receives commands from the host and manages the machine that it's running on. The host serves as a software repository and communicates with a large number of Agents.

I was team lead, and designed and implemented a large portion of the OCAgent. I was also involved in much of the technical decision-making that goes into the product.

**Mediagate, San Jose CA. August 1998 – January 2002 (full time startup)**

Engineering Applications Manager / Architect reporting to Director of Engineering.

Skills used: WindowsNT/98, Linux, Java, J2EE, JDK1.3, Tomcat, ISAPI, Apache, Engineering Management, XML, XSLT

With a team of ten engineers, designed and developed a distributed application server, known as Quicksilver. This was the cloud before any called it that. The project involved development entirely in Java, using JINI, Xalan and Xerces, so as to generate and transform XML using XSL. I also developed servlets for the Tomcat servlet engine. I was one of four inventors on the project, and lead a team of four developers, two in Israel.

Quicksilver is a complex data aggregation engine, which allows disparate and alien data sources to cooperate and communicate to arbitrary interfaces, either over a local network or on the same computer. Easy to use adapters allow developers to integrate their services into the system. XML and XSLT allow for easy user interface development.

Aided an attorney in writing patents for this project containing over fifty claims relating to dynamic XML generation, XSL, dynamic datasource mapping to XML fragments, and other aspects of the architecture. See **patent** below.

**Microsoft Hotmail, San Jose CA. January 1998 - June 1998 (full time)**

Skills used: Solaris, Java, JDK, CVS, C/C++, BASH, Apache

Set up and administered a CVS source code control system for Hotmail. With a team of three engineers, redesigned Hotmail architecture with the intent of rewriting it in Java. This was never executed.

**Netscape Communications, Mountain View CA. August 1996 - January 1998 (full time)**

MacOS, WindowsNT, Java, C/C++, JDK, CodeWarrior

I developed parts of Netscape Navigator, originally coded in C/C++ on the Macintosh. I later worked on a version coded in Java. Netscape Navigator (Gecko) was the largest Java project of it's day and eventually became FireFox. For details on this project see my website.

**Apple Computer, Cupertino, CA. June 1992 - August 1996 (full time)**

MacOS, C/C++, MPW, CodeWarrior

Hired by Apple Computer in the early '90s to work on the original Macintosh Operating System (MacOS). I wrote part of the graphics system known as QuickdrawGX. I also worked on the printing system for the Mac and developed one of the Control Panels used. All coded in C/C++. For details see my website.

**Patents:**

**Software Architecture for Interaction with Dynamic Data Sources and Role Based Access Control** – for Mediagate

- United States Patent WO/2002/050691 Issued December 19, 2000

**Electronic Paper Display Updates – for the Amazon Kindle**

- United States Patent 8819568 Issued August 26, 2014

**Links to Code Samples, Projects and Other Information**

Please see my career website <http://chrishull.com/career>

My skills matrix page <http://faq.chrishull.com/skills.html>

Frequently Asked Questions <http://faq.chrishull.com>

GitHub code samples <https://github.com/chrishull/>

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Thank you for your interest.

-Christopher T. Hull