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## Overview

- Experienced in leading development team members, developing project schedules and insuring delivery of work product.
- Skilled team leader, architect, mentor and developer with experience designing and implementing object oriented, pattern based applications within an Enterprise Service Oriented Architecture. Proven ability to design and implement high quality, service oriented applications and integrations that meet or exceed customer expectations.
- Experienced in the development of web based multi-tier, SOA Java and Groovy applications using Spring MVC, Hibernate, myBatis, Struts, Tiles, JSF, JSP, J2EE, Camel, RabbitMQ, IBM MQ Series (using JMS & Camel), and various data base systems.
- Skilled in object oriented design & development using UML, Design Patterns, J2EE, Java, Groovy, PL/SQL, C++, Perl, Korn, borne and bash scripts. Operating systems include Linux, HP-UX, Solaris, AIX, and Windows(w/Cygwin).
- Strong analytic and diagnostic skills; experienced in identifying and resolving problems regarding performance and reliability in new and existing applications.
- Experienced in building and maintaining well- structured build and change control environments.
- Excellent communication skills, both written and verbal. Experienced working with client users in design, testing and training.

## Technical Summary

- **Languages**

*Java (including Java 8 lambdas & collection streams), Groovy, J2EE, JSF, JSP, JSTL, Javascript, HTML, C++, PERL, PL/SQL, Korn, Borne, BASH and C Shells, Visual BASIC, COBOL, PL/1, Intel x86 Assembler*

- **Operating Environments and Databases**

*Linux, MS-Windows, Docker, Kubernetes, Solaris, HP-UX, AIX, Oracle 10g, 9i, 8i, Cassandra, MS-SQL, Informix, PostgreSQL, MySQL*

- **Development Tools**

*Eclipse, JBuilder, Visual C++, vi, Make, Ant, Maven, Gradle, Git, GitHub, Docker, Subversion, Continuous, CVS, PVCS, SCCS, SQLDeveloper, Firebug, HttpFox, Fidler2*

- **Architectures**

*Service Oriented Architecture, Enterprise Integration Patterns, Multitier Web Applications*

## Education

- Bachelor's degree Georgia State University, College of Business Administration, Computer Information Systems.
- IBM Technical Overview of WebSphere Development Version 5
- Web Services Development Using WebSphere Studio 5
- Solaris System Administration, Sun Microsystems.
- Microsoft Certified: Networking Essentials, Windows NT Workstation 4.0, Windows NT Server 4.0
- Continually updating skills using knowledge tools such as Safari Books, Videos and Training.

# Work History

July 2017 to  
September 2017  
Technologies

**Home Depot (contract)**  
**Lead Java Developer, Consultant**

Java, Javascript, Spring, Spring MVC, Spring Boot, AngularJs, Pivotal Cloud Foundry, JSON, XML, IntelliJ, Postman, Newman, Gradle, Ant, Ivy, JFrog Artifactory (repository), GIT, Tomcat, Oracle, BASH, Linux, OSx

**Duties**

- Senior consulting member of a team tasked with implementing AMT2, Home Depot's merchandising assortment scheduling and execution application.
- The AMT2 application works as an execution engine in a Service Oriented Architecture using microservices with an Oracle database to schedule and execute projected merchandise placement in Home Depot stores. The application receives plans for execution from another SOA application used to manage the assortment mix for all Home Depot Stores. Once a plan created by the upstream application is ready to be implemented, it is handed off to the AMT2 application for scheduling and execution.
- The application is deployed using Continuous Integration / Continuous Delivery methodology with the application artifacts deployed to production twice a week.
- Worked as a pair programming team member implementing Test Driven Development using Scrum methodologies and techniques. These include user story creation, backlog grooming, story estimation and implementation using test driven development.
- Provided support for user testing, and post deployment support for the application and microservices.
- Implemented microservice endpoints deployed in Home Depot's internally developed Tomcat Grid as well as Pivotal's Cloud Foundry. New endpoints are implemented using Spring MVC running within a Spring Boot application.
- Maintained legacy application implementations in the code mix that are SOA oriented and implemented in a more monolithic architecture using Jersey. Part of the team's responsibilities included the gradual migration from the monolithic legacy applications implemented using Jersey to microservices implemented using Spring Boot, Spring MVC and Spring Batch and deployed in one of Home Depot's private instances of Pivotal's Cloud Foundry
- Implemented unit and integration tests using JUnit 4, Mockito and PowerMock.
- Implemented end-to-end tests using Postman and Newman.
- Mentored and assisted other team members with various technical issues including Java, Groovy, OSx and network related issues.
- Worked with testers to resolve environmental issues and clear blockers to successful project implementation.

**October 2014 to  
June 2017  
Technologies**

**AT&T (contract)  
Senior Software Consultant**

Java, Groovy, Apache Camel, J2EE, JSON, Spring, RabbitMQ XML, SOAP, HTTP, HTTPS, Eclipse, JMeter, Maven, Ant, Nexus(repository), GIT, Subversion, Jetty, Apache Web Server, Firebug, Fidler2, Charles (diagnostic proxy), Oracle, BASH, Linux, OSX, Cygwin

**Duties**

- Senior consulting member of a team tasked with updating AT&T's near real time messaging service and Common Notification Service. These are JSON based RESTful services used by AT&T's multichannel SOA to support messaging applications.
- The message service provides integrated, searchable SMS, MMS and email messaging for an AngularJS based web app and to other component applications within AT&T's enterprise SOA.
- The Common Notification Service provides subscription based notification events to other parts of the AT&T SOA.
- Both services ultimately provide messaging and notifications to both third party business customers and retail consumers.
- Implemented Enterprise Integration Patterns using Apache Camel routes with Camel-Spring XML and annotated Camel-Spring processor beans.
- Identified the fact that the application did not support any sort of orderly shutdown mechanism and implemented a method to shut down the application when a signal is received from Linux.
- Implemented changes to the build and deploy process to properly support the new messages applications. This includes changes to the Maven POM and Ant build scripts as well as scripts used for deployment into RHEL.
- Implemented JMeter tests to test routes and beans implementing services within both services.
- Wrote BASH scripts on both RHEL and OSX for various development life cycle tasks such as application startup, log file backups and cron jobs to clean up old files that are no longer important.
- Implemented BASH scripts on RHEL test servers that wrap JMeter tests and assist testers in their day-to-day testing and to verify proper service operation during deployments to all environments.
- Mentored and assisted other team members with various technical issues including Java, Groovy, Maven, Ant, Application Server, Linux, Windows and network related issues.
- Worked with testers to resolve environmental issues and clear blockers to successful project implementation

**July 2012 to  
October 2014  
Technologies**

**Verizon Wireless, Inc. (contract)  
Senior Software Consultant**

Java, Groovy, J2EE, JSP, Javascript, AJAX, jQuery, Bootstrap, Knockout, Eclipse, Spring MVC, Camel, Spring Security, XML, Web Services, SOAP, JSON, Firebug, Fidler2, Maven, Nexus(repository), Subversion, Websphere, Tomcat, Jetty, Apache Web Server, Jenkins Build Server, Oracle, BASH,

Linux, Websphere, MQSeries, JMS, MS-Windows, Cygwin

## Duties

- Senior consulting member and technical lead of a team tasked with replacing an existing Java Swing based client/server monolith application with a Spring MVC implementation using Bootstrap CSS and JQuery. The web application is part of an SOA responsible for provisioning wireless devices on the Verizon Wireless network for third party resellers using their own independent product names.
- This web application uses a Single Page Application (SPA) model that minimizes the number of page loads and delegates updates to asynchronous calls to the back-end services.
- Integrated the web application with the new provisioning services that are part of the multichannel SOA at the company.
- Implemented back-end services to support both the web based application and the reseller partners directly (not all partners used the web application and instead used the services directly).
- Implemented communications with other components in Verizon's Multichannel SOA using a combination of HTTP and MQSeries using JMS
- Implemented Java based POJO access to the application's Oracle 11g database using myBatis (formerly iBatis) mappers and typical data access and transfer design patterns.
- Implemented Spring Security for use with the project's new web based application. CA SiteMinder provides authentication and authorization is implemented using Spring annotations and security tags.
- Implemented content based message router for incoming XML web service requests. Within the SOA of this application landscape, the Camel based router application routes content between multiple application servers based on values contained in a defined number of required XML tags. In addition, the application is responsible for enforcing a limited number of content rules such as xsd content validation, duplicate content id detection and rejection, throttling to enforce SLAs and URL Decoding.
- Mentored and assisted other team members with various technical issues including Javascript, CSS, Java, JSP and Server and network related issues.
- Provided extensive developer platform support and administration.
- Added new repositories to the business' Nexus server for JDK 6 artifacts (Snapshot and Release) to allow parallel development and deployment of binaries to be used with an older version of IBM Websphere using IBM's JDK5 and newer binaries using JDK6 and newer Websphere servers.
- Set up Jenkins build jobs to provide continuous automated builds based on source code commits during the day and periodic scheduled builds overnight.
- Set up Jenkins build jobs to provide one click deployments of the latest software build to Websphere clusters for use by developers and support personnel. These were implemented using a combination of Jenkins

configuration, BASH and Jython scripting in the Websphere environment.

- Implemented Apache rewrite rules to assist in the conversion of server requests from being sent to legacy applications to being sent to the new applications.
- Worked closely with the testing teams to insure the testing systems were updated in an orderly fashion and were operating normally.

**October 2011 to  
July 2012**

**Ericsson SATV (contract)  
Development Lead, Professional Services**

**Technologies**

Java, J2EE, XML/XSLT, CORBA, Javascript, Ant, Eclipse, Subversion (Source Control), JBoss, Tomcat, Oracle, JBoss JPDF, JPF, Apache, BASH, Linux, MS-Windows, Cygwin, Ericsson CMS, Ericsson OpenStream, Ericsson WatchPoint Studio, Astah Design Tool

**Duties**

- Review High Level Design Documents from Systems Architects for accuracy and consistency. Use high level designs to establish Level of Effort estimates for Professional Services development.
- Identify issues with custom CORBA Content Store application developed by the Ericsson Professional Services team and used to provision multimedia assets in a Content Distribution Network. Problems were associated with sending large (multi gigabyte) content files over the Internet using FTP. Issues encountered included the firewall closing the idle control channel after an hour causing the transfer to fail. Abstracted the use of FTP to an interface to allow the use of an alternate FTP client package (moved from ftp4j to Apache Commons Net package). Implemented code to overcome this issue and advised local technical team on configuration.
- Implemented a SOAP proxy to resolve an issue between the producer and consumer of the service. The producer of the service had a bug that prevented it from returning a proper file name for a specific type of asset. The proxy when inserted between the producer and consumer corrects invalid data from the producer and fixes it in the returned XML.
- Created work flow templates for processing multimedia content and metadata within the Ericsson CMS application using the Ericsson WatchPoint Studio (Eclipse plug-in).
- Documented custom components developed by the Ericsson Professional Services staff for use by Ericsson customers.
- Provided on-site training and professional development support to global clients.

**May 2010 to  
October 2011**

**InterContinental Hotels Group (IHG) (contract)  
Tech Lead.**

**Technologies**

Java, J2EE, GWT, MVP4G, Spring, RMI, XML/XSLT, Javascript, Maven, Eclipse, Subversion (Source Control), Resin, Apache, BASH, Linux, MS-Windows, Cygwin

**Duties**

- Led team tasked with developing a new release of a web application used by IHG Priority Club Rewards members to view and manage their

rewards accounts

- Application uses GWT (Google Web Toolkit), MVP4G (Model View Presenter for GWT) for the user interface; as well as Spring, Hibernate and many other Java based technologies all running on a Resin web server and is deployed as a J2EE WAR file within a J2EE EAR.
- Responsibilities include direct interaction with business owners to negotiate requirements and functionality, lead in the definition of the implementation, write code and mentor other technical members of the team.
- The web application is part of IHG's SOA and uses an internally provided jar file providing unified access to the other components within the IHG SOA landscape.
- Developed modular, loosely coupled multi-domain Single Sign On (SSO) solution for web applications used in IHG's B2C web sites.
- Application development is done using the Eclipse IDE with the GWT plug-in and SDK.
- Agile/Scrum management methodology.
- Provision and configure RHEL 5 Linux systems, Apache 2.2 web servers and Resin J2EE Application Containers used for new application development.
- Develop Apache re-write rules in support of new B2C web application development
- Create and maintain Hudson build tasks and services
- Provide technical advice and support to teams throughout the full development life cycle.

**March 2010 to  
May 2010**

**Lexis/Nexis (contract)  
*Senior Software Developer.***

**Technologies**

Java, J2EE, GWT, Hibernate, RMI, XML/XSLT, JDBC, Javascript, Ant, Oracle 10g, PL/SQL, JBoss, Eclipse, Subversion (Source Control), Apache, BASH, vi, HP-UX 11.x, Solaris 8, MS-Windows, Cygwin

**Duties**

- Developed application code for the company's web screening web site. The site uses the Google Web Toolkit for the user interface.
- Developed custom masking technology to allow masking of personal information in different ways based on configuration information stored in the database and retrieved using the Java EE3 JPA/Hibernate persistence layer.
- Added enhancements to screening tool to allow users to defer automatic the re-screening of candidates based on time frames specified in the configuration stored in the database.
- Changed style sheet configuration to correct styling issues with the user interface.

**August 2007 to**

**Verizon Wireless, Inc. (contract)**

**February 2010  
Technologies**

***Architect/Senior Software Developer.***

Java, J2EE, JSP, JSF, JSTL, Seam, Hibernate, Spring, Struts, Tiles, Stripes, RMI, XML/XSLT, JDBC, Javascript, Ant, Oracle 11g, 10g, 9i, 8i, Toad, PL/SQL, Stored Procedures, Packages, Triggers, SQL Loader, Perl, JBoss, Apache, Tomcat, Korn, Borne, BASH, vi, HP-UX 11.x, Solaris 8, MS-Windows, Cygwin, Eclipse, JBuilder, Continuous/Synergy (Source Control)

**Duties**

- Implemented Hibernate based architecture for web application used to configure and manage wireless switches.
- Added Spring to provide Inversion of Control and aid in configuration and add annotation based transaction control to Hibernate implementation.
- Added EhCache to Hibernate configuration to improve overall performance when accessing tables primarily used for reference.
- Developed web application components using JSP, Struts, Stripes and Servlets. These components are used to manage configuration information for the wireless network.
- Directly involved in meetings with end users to help establish use cases and design business process automation solutions.
- Worked on team implementing web based billing and provisioning system based on JBoss Seam, JSF, RichFaces and Hibernate.
- Developed web services client using AXIS based on WSDL supplied by another departmental web service provider.
- Developed XML based client used to update external databases. Similar to web service but without the use of WSDL, etc. Used Dom4J to construct XML for http submission to custom server.
- Designed and implemented application framework to allow the creation of custom Excel workbooks in Java. Template workbooks are created and stored in the database for later use in creating Excel workbook based reports for the user. This framework uses an interface, an abstract base class and a factory to provide loose coupling and extensibility.
- Developed application functionality using the above-mentioned framework to provide reports to users in multiple sheet Excel workbooks.
- Converted communications application from using telnet to ssh. The Java based application is used to collect and update data from/to wireless switches.
- Defined tables, constraints, and triggers and wrote packages, procedures and functions for the application in PL/SQL on Oracle servers running 10g and 11g.
- Provided technical support to diagnose issues impacting the production application. This included writing numerous shell scripts, managing cron tabs, etc.
- Assisted team with network and configuration issues, providing technical knowledge regarding firewall and other network related configurations.
- Set up the group's wiki (JSPWiki).
- Assisted other developers in setting up and using Eclipse and Tomcat on



their PCs. Documented the process using the groups wiki.

<b>April 2006 to August 2007</b>	<b><u>Availity, LLC (contract)</u></b>
<b>Technologies</b>	<b><i>Senior Developer</i></b> Java, J2EE, JSP, Servlets, JavaScript, Hibernate, Spring, IBM RAD IDE, IBM Websphere Application Server, Vitria BusinessWare business process management, Edifecs XEngine for EDI/HIPAA, Solaris, Cygwin, Windows, Accurev SCM, Oracle 10g database
<b>Duties</b>	<ul style="list-style-type: none"><li>• Developed new and enhanced existing application functionality for Availity's Web Portal.</li><li>• Portal uses custom JavaScript, JSP, Servlets. Hibernate and POJO's are used for ORM and data access, Spring is used for IOC configuration.</li><li>• The web portal is deployed using IBM Websphere application servers.</li><li>• Development is done using IBM's RAD IDE.</li><li>• Oracle 10G is used to manage and store, transactional and configuration data.</li><li>• Developed and maintained application modules for Availity's EDI based health care claims processing system.</li><li>• Introduced Spring IOC to increase application flexibility and replace the need for hard-coded class based application functions.</li><li>• Oracle 10G is used to manage and store, transactional and configuration data.</li><li>• Developed shell and PERL scripts to automate and streamline day to day maintenance functions as required.</li></ul>
<b>March 2006 to April 2006</b>	<b><u>Shaw Industries (contract)</u></b>
<b>Technologies</b>	<b><i>Senior Developer</i></b> Java, NetBeans, Swing, JDBC, MS SQL Server, Hibernate, Windows
<b>Duties</b>	Participated in design and development of Swing based sales force automation and order processing application. The application is to be deployed to the sales force on tablet PC's using a local MS SQL Server. The Hibernate ORM is used for Object Relational Mapping between the application and the database. Updates to the local data base are facilitated using SQL Server database synchronization. Typical MVC application architecture was used in development facilitated by Sun Microsystems's Net Beans IDE.
<b>January 2006 to February 2006</b>	<b><u>Doosan Infracore (contract)</u></b>
<b>Technologies</b>	<b><i>Senior Developer</i></b> C, Perl, Korn Shell, Java, AIX
<b>Duties</b>	Acquired and built latest versions of Apache 2.2 web server, mod_perl module, mod_jk module, mod_php module, PERL interpreter, PHP interpreter and OpenSSL library on AIX 5.2 using the IBM Xlc compiler. Integrated binaries with Tomcat 5.5 Java web server.

<b>November 2005 to January 2006</b>	<b><u>eMeta - Turner Entertainment (contract)</u></b>
<b>Technologies</b>	<b><i>Senior Developer</i></b> Java, J2EE, Servlets, Beans, Spring, RMI, JSP, Struts, Eclipse, Maven, XML/XSLT, JDBC, junit, MockStruts, eMeta - eRights, Sun One App Server, Apache/Tomcat Server, Korn, Borne and BASH, Linux, Windows, Cygwin, CVS and Subversion
<b>Duties</b>	Maintained eCommerce web applications. Developed unit tests for business objects using junit and Struts actions using MockStruts. Maintained maven project files.

<b>May 2001 to November 2005</b>	<b><u>Verizon Wireless, Inc. (contract)</u></b>
<b>Technologies</b>	<b><i>Architect/Senior Software Developer.</i></b> Java, J2EE, JSP, Struts, Tiles, RMI, XML/XSLT, JDBC, Javascript, Ant, Oracle 10g, 9i, 8i, PL/SQL, Stored Procedures, Packages, Triggers, SQL Loader, Perl, PHP, Sun One and Apache/Tomcat Servers, Korn, Borne, BASH, vi, HP-UX 11.x, Solaris 8, Windows, Cygwin, Eclipse, JBuilder, Continuous (Source Control)
<b>Duties</b>	Designed and developed: <ul style="list-style-type: none"> <li>• Pattern based, Web applications using Struts, Tiles, Tomcat, SunOne and Oracle 10g.</li> <li>• Multi-threaded, event-driven communications applications to collect and update information on telecommunication switching equipment made by Lucent, Nortel and others.</li> <li>• Secure web site using JSP, Servlets, Tomcat and Oracle.</li> <li>• Application to collect data from a vendor's telnet screens and store the captured data in an Oracle database.</li> <li>• Back-end service components in Java, and stored procedures in PL/SQL.</li> </ul> <p>Converted build and deployment environments from make to Ant. Performed application performance evaluations and tuning, on Oracle queries, views and procedures. Mentored and assisted other team members in their design and development efforts. Migrated web based application from Java Web Server to Tomcat web server.</p>

<b>September 1999 to May 2001</b>	<b><u>Visionary Systems, Inc.</u></b>
<b>Technologies</b>	<b><i>Technical Lead/Architect.</i></b> Visual C++, Java, PERL, Solaris 8, Windows, ODBC, MS SQL Server, Apache/Tomcat Server, Visual Source Safe
<b>Duties</b>	Defined architecture and led a team in the specification, design and development of a multi-threaded, XML transaction processing application used to supply credit reporting services to a consumer web site. Job duties included: architecture definition, delegation of development duties and tracking progress and results. <p>Designed and developed multi-threaded, Java based, real-time, fault tolerant FTP server application. Designed and developed Windows based remote system management application for monitoring running applications, restarting applications and rebooting systems. Member of a team tasked to</p>

define consistent source code management policies and procedures.

<b>February 1999 to September 1999</b>	<b><u>Sprint (contract)</u></b>
<b>Technologies</b>	<b><i>Sr. Software Developer.</i></b> Visual C++, HTML, CGI, Windows, Solaris, ODBC, Sybase, MS-SQL, Netscape Enterprise Server, Visual Source Safe,
<b>Duties</b>	Designed and developed mid-tier services for an Internet based video reservation system, a trouble ticket tracking application and other projects using Visual C++, ODBC and MS-SQL Server. Diagnosed and fixed bugs in applications and libraries identifying areas that were not thread safe.
<b>March 1998 to January 1999</b>	<b><u>The Coca-Cola Company (contract)</u></b>
<b>Technologies</b>	<b><i>Technical Coach and Mentor</i></b> C, C++, Java, Visual Basic, ASP, HTML, PERL, AIX, Front Page, Oracle, COM / DCOM / ADO / ODBC, TCP/IP, PVCS (Change Control)
<b>Duties</b>	Subject matter expert on the use of C++. Mentored and supported application developers in the use of, COM/DCOM, ODBC, ActiveX controls and Windows NT. Evaluated Java and various Java development tools for inclusion in Coca-Cola's standardized software architecture.
<b>October 1997 to March 1998</b>	<b><u>Security First Technologies, a subsidiary of Security First Network Bank</u></b>
<b>Technologies</b>	<b><i>Technical Lead</i></b> C, C++, Informix, Borne/Korn Shell, Tuxedo, HP UX, TCP/IP, Telnet, SNA
<b>Duties</b>	Led development team tasked with the development and implementation of custom software for Internet banking. Duties included, project definition, scheduling and management, system architecture, data modeling and application design and development. Developed applications using C++, embedded SQL and Tuxedo to facilitate messaging between web based and legacy systems.
<b>June 1997 to September 1997</b>	<b><u>I.B.M. Interactive Media (contract)</u></b>
<b>Technologies</b>	<b><i>Senior Development Engineer</i></b> Visual C++, MFC, ActiveX, PERL, DB2, Windows, AIX, TCP/IP
<b>Duties</b>	Design, development and integration of application software in the Windows 95 and NT environments using Visual C++, MFC and ActiveX controls for Internet communications for Worldbook 98 Multimedia Encyclopedia.
<b>September 1993 to May 1997</b>	<b><u>BellSouth Information Systems.</u></b>
<b>Technologies</b>	<b><i>Senior Systems Analyst.</i></b> C, C++, Java, Korn, Borne and C shells, Solaris, UnixWare, SunNet Manager, ISDN, TCP/IP
<b>Duties</b>	Project lead of a team responsible for the design of an SNMP based network management system. Designed and developed object oriented system management and control software for IVR application platform. Integrated third party computer telephony hardware. Selected products, designed and integrated hardware platforms for a PC based switch product for cellular communications. Provided system administration support for Solaris, SunOS and UnixWare systems used in the project.

<p><b>October 1991 to September 1993</b>  <b>Technologies</b>  <b>Duties</b></p>	<p><b><u>Scientific Software, Inc. (acquired by BellSouth)</u></b>  <b><i>Staff Engineer, Professional Services.</i></b>  C, PL/1, COBOL, Stratus VOS, AIX, TCP/IP, SNA, 3270,  Professional services developer responsible for project estimation and software design, development, and installation.</p>
<p><b>March 1990 to October 1991</b>  <b>Technologies</b>  <b>Duties</b></p>	<p><b><u>Scientific Games, Incorporated.</u></b>  <b><i>Senior Systems Analyst</i></b>  C, COBOL, 68K Assembler, Intel x86 Assembler, Stratus VOS, OS/2, Windows, SunOS 4.1.x, DEC VMS, AMX Embedded OS, TCP/IP  Designed client/server based lottery ticket validation system. Designed and developed asynchronous, multi-layered communication protocol to support application. Developed embedded system device drivers for POS terminal.</p>
<p><b>May 1989 to March 1990</b>  <b>Technologies</b>  <b>Duties</b></p>	<p><b><u>Responsive Software Solutions, Inc.</u></b>  <b><i>Project Supervisor, Personal Computer Development.</i></b>  C, x86 Assembler, OS/2, DOS, VM/CMS, PVCS  Developed OS/2 HLLAPI based automated file transfer system to send and receive marketing data between PROFS and PC using SNA over token ring. Tuned, stabilized, enhanced and supported a large multi-overlay DOS based front end for this system.</p>
<p><b>April 1981 to May 1989</b>  <b>Technologies</b>  <b>Duties</b></p>	<p><b><u>Digital Communications Associates, Incorporated</u></b>  <b><i>Technical Services Team Lead</i></b>  C, x86 Assembler, DOS, OS/2, VM/CMS, TCP/IP  Managed a group of system support engineers responsible for quality assurance and beta testing, and third level customer support. Developed and implemented detailed quality assurance tests. Designed and developed communications and communications support software for the PC. Designed PC back plane hardware for testing of PC option cards.</p>