KEVIN L. SHORT

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PROFESSIONAL OBJECTIVE

Seeking a hands-on DevOps or Software Development position in a senior, principal, leadership, or architecture role. Proven track record of building highly reliable, robust software systems. Brought start-up and early stage projects to successful, timely completion. Defined software, automation, and operational architectures, software engineering processes, built engineering teams and labs, performed initial hardware/software bring-up.

BACKGROUND SUMMARY

- Internet scale deployment, operation, and monitoring, for Cloud and physical servers.
- DevOps and Automation of software development : Continuous Delivery, Integration, Deployment, and Improvement.
- Full Stack developer, experienced in Agile, Iterative, and Waterfall software development processes.
- Expert level: C, C++, Java, Ruby, Python, Perl, Tcl/Tk, Expect, Bash, and AWK.
- Expert level: Linux (Ubuntu, Debian, CentOS, RedHat), BSD (Mac OS X, FreeBSD, NetBSD, OpenBSD), and System V UNIX (Solaris, AIX, HP-UX).
- High-performance, concurrent, multi-threaded, "hard" real-time and embedded systems.
- Network programming and network management systems.
- Excellent debugging and troubleshooting skills.
- Excellent communication skills and technical leadership experience.
- Over 35 year's commercial software development experience. BA in Computer Science.

BACKGROUND HIGHLIGHTS

Cloud Computing • DevOps • Automation • Full Stack • Embedded Systems • Real-Time Systems • SNMP • Network Management Systems • Java Technologies • Object-Oriented Design & Analysis • Voice over IP • Optical Networking • Robotics • XML Technologies

PROFESSIONAL EXPERIENCE

Principal Automation Engineer, Infrastructure: Dyn, Manchester, NH. (Nov 2014 – Present)

- Evolving a DevOps culture, breaking down silos between Development, Operations, and separate DevOps teams.
- Defining the engineering and operations road maps for Automation and related development and infrastructure projects.
- Instituting processes of Continuous Delivery, Integration, Deployment, and Improvement.
- Architecture and system design for Automation and infrastructure-as-code for Development, Integration, Staging, and Production.
- Self-service provisioning for bare metal, virtual machines, and containers, in a hybrid cloud of data centers and AWS EC2.
- Metal as a Service bare metal automated provisioning solutions, deploying hundreds of servers across multiple sites.
- Skills: AWS, EC2, Chef, Ansible, Rundeck, KVM, Docker, Vagrant, Terraform, OpenStack, Ruby, Python, Perl, Bash, AWK, Go, Java, C/C++, Makefiles, Cobbler, Jenkins, GitHub Enterprise, Chef Enterprise, Ubuntu, Debian, CentOS, FreeBSD.

Manager, Automation Engineering: Dyn, Manchester, NH. (Apr 2014 – Nov 2014)

- Managed rapid growth within Engineering, growing from 20 to 100 members over an 18-month period.
- Hands-on position, working side-by-side with colleagues on implementing automation.
- Served multiple roles: manager, as scrum master, and technical owner for multiple Agile squads.
- Skills: Chef, Docker, Rundeck, Ansible, KVM, Ruby, Python, Perl, Bash, AWK, Go, Java, C/C++, Makefiles, Cobbler, Jenkins, Makefiles, GitHub Enterprise, Chef Enterprise, Ubuntu, Debian, FreeBSD.

Manager, Platform Engineering: Dyn, Manchester, NH. (Oct 2013 – Apr 2014)

- Managed development, testing, fully automated deployment and monitoring of DNS services to new China Network.
- Manager in a matrix organization, scrum master, and technical owner for an Agile squad.
- Lead design of Development, Integration, Staging, and Production environments.
- Lead design of Continuous Integration pipeline and Automated Testing framework.
- Built local and mirrored Ubuntu repositories.

DevOps & Tools Engineer: Dyn, Manchester, NH. (Feb 2013 – Oct 2013)

- Built Dyn's first automated application deployment using Chef, and package delivery using Debian (.deb) packaging.
- Debian packaging for C++, Java, Go, Python, Perl, and Node.js applications.
- Chef installers for Cassandra and MySQL databases, and Dyn traffic management (DNS) applications.
- Skills: Chef, Berkshelf, Vagrant, Debian pbuilder, Makefiles, VirtualBox, VMware ESXi/vCenter, Cassandra, MySQL, Ubuntu.

Senior Software Engineer: Coyote Point Systems, Millerton, NY. (Nov 2011 – Dec 2012)

- Application Delivery Controllers: Network load balancing and global server load balancing products, on physical and virtual systems.
- Responsible for: L3 (ICMP), L4 (TCP/UDP), L7 (active content verification) monitoring, and server load balancing subsystems.
- New feature design and development included: health checking and load balancing features that interacted with server side agents, VMware ESXi hypervisor, and SNMP agents.
- Shared responsibility for: disaster recovery and failover: active/passive, active/active, and N+1 configurations; and configuration management.
- Built the NetBSD-based products using cross-compilation on Mac OS X.
- Skills: C, assembler, Tcl, Python, Perl; NetBSD, Mac OS X, FreeBSD, Linux; VMware ESXi, vSphere, and Fusion; Net-SNMP, OpenSSL, pfSense, DNS, Doxygen, Eclipse, Perforce, Bugzilla, Intel x86.

Consultant: Proliphix, Westford, MA. (Sep 2011 – Nov 2011)

- Internet-managed energy control system (IP thermostat, HVAC, and building control), running embedded Linux and embedded Java on ARM processors.
- Responsible for updating entire platform: energy control application and features, Linux kernel, driver development, embedded database, RFS, U-boot, and boot ROM.
- Skills: Java, C, assembler, Perl; Timesys Linux; Eclipse, Jira, Mercurial, CruiseControl, Atmel ARM.

Principal Software Engineer: Lantiq Broadband HoldCo Inc., Bedford, MA. (Apr 2011 – Sep 2011)

- System-on-Chip (SoC) software for a G.HN Home Networking protocol engine, running embedded Linux and ThreadX RTOS on MIPS virtual processing engines.
- Responsible for Linux kernel porting (2.6.32); driver development; U-boot; and boot ROM.
- Stabilized the board support package (BSP) software development team by: establishing source code management disciplines; standardizing software release procedures; preparing and tracking software schedules; coordinating efforts with multiple sites; implementing defect and project milestone tracking; and implementing a continuous integration environment.
- Skills: C, C++, assembler, Tcl/Tk, Expect, ThreadX, Eclipse, Jira, Mercurial, CruiseControl, MIPS34Kc, Lauterbach Trace32.

Consultant: Constitution Medical, Inc., Boston, MA. (Jan 2011 – Apr 2011)

- User interface components in Java for an integrated hematology instrument.
- Skills: Java, Eclipse, Jira, FogBugz, Mercurial.

Technical Director, Consulting Software Engineer, Principal Software Engineer: Cedar Point Communications, Inc., Derry, NH. (Apr 2005 – Apr 2011)

- VoIP software subsystems for embedded platforms in C and assembler.
- IMS software subsystems for off-the-shelf servers, in Java.
- Debugging, troubleshooting, and performance analysis for Voice over IP products.
- IP Multimedia Subsystem (IMS) and PacketCable 2.0 lab and development environment.

- Proactively isolated performance issues for our products and our development environment, and provided timely support of development and test teams, working closely with software and hardware developers, on both embedded systems and EMS.
- Skills: Java, C, Python, Perl, Tcl/Tk, Expect, XML, XSLT, Enea OSE, MySQL, Eclipse, JBoss, JUnit4, Ant, Log4j, Cisco IOS, Juniper JunOS, SonicWall firewall, DNS, LACP, OSPF, DHCP.

Consultant: Quintron Systems, Inc., Santa Maria, CA. (Dec 2004 – Apr 2005)

- Java code integrating Facial Biometric Devices for an Access-Control System. Plug-in modules supporting distributed facial biometric devices. Implemented use cases for subject enrollment, standalone identification, and verification in conjunction with card readers.
- Multi-threaded application, device drivers, and Java SWT/JFace GUI interfaces, with a persistent store managed with Hibernate.
- Cross-platform access control system supported Windows and Linux, and was database-independent, supporting SQL Server, Sybase, Oracle, MySQL, embedded databases, and more.
- This was a telecommute development environment.
- Skills: Java, SWT/JFace, Hibernate, HSQLDB, SQLServer, Eclipse, JUnit, Apache Ant, Apache Log4j.

Consultant: Cellular Specialties, Inc., Manchester, NH. (Dec 2004 – Apr 2005)

- Embedded software for a Digital Repeater (Bi-Directional Amplifier) for in-building wireless solutions. SNMP MIB and agent; event reporting protocol; inter-process communication, command line interpreter; low-level hardware interfaces for SPI, I2C, PCMCIA, USB, A/D, digital I/O.
- Introduced software engineering practices; source code control; software defect management; software life cycle management; mentored team members.
- Skills: C, Tcl, Expect, Perl, SNMP, Embedded Linux, User-Mode Linux, Linux From Scratch, Red Hat Linux, CVS, Bugzilla, MySQL.

Consultant: Envisn, Incorporated, Bolton, MA. (May 2004 – Sep 2004)

- Framework for integrating new applications with the Cognos ReportNet Enterprise Business Intelligence (BI) product. The solution comprised servlets, XML, XSLT, JavaScript, DHTML and the ReportNet Java SDK, for improved data exploration and integration with Cognos Connection, Report Studio and Query Studio.
- Skills: Java, J2EE, J2SE, Servlets, JSPs, XML, XPath, XSL, XSLT, Eclipse, MyEclipse, JavaScript, DOM4j, DOM, SAX, SOAP, WSDL4j, CSS, DHTML, HTML, HTTP, JAXRPC, JSTL, JUnit, SAAJ, Apache Ant, Apache Axis, Apache Commons Discovery, Apache Commons Logging, Apache Log4j, Apache Tomcat, Apache Xalan, Apache Xerces, Apache XML Commons, Cognos ReportNet, Sun iPlanet LDAP Server, Microsoft SQL Server 2000.

Principal Software Engineer: Brightline Technology, Incorporated, Rye, NH. (Apr 2003 – Mar 2004)

- Architect for an enterprise-quality Java application server for IBM/Lotus Domino customers.
- The "Brightline Application Server - Enterprise Edition" allows customers to host existing J2EE applications in a Domino environment, scale Domino-based web applications through J2EE technologies, add Notes and Domino functionality to J2EE applications, add J2EE functionality to Notes and Domino applications, and use the Domino security model in J2EE applications.
- The server technology includes an extensible software backbone that provides all standard J2EE services to Domino, administration and deployment tools for managing J2EE servers and applications from either a Notes Admin client or web browser, and a fully transactional, enterprise-ready data store to complement NSF (Notes Storage Facility).
- Skills: Java, JavaScript, Expect, XML, XSLT, XSL, XSL-FO, Red Hat Linux, SuSE Linux, Lotus Domino & Notes, SSL & OpenSSL, LDAPv3, SSH & OpenSSH, SMTP, IMAP, J2SE, J2EE, Eclipse, JBoss, Apache Tomcat, Apache Ant, Apache Log4j, Apache Xalan, Apache Xerces, Apache HTTPD, Saxon, Apache Axis, Apache Cactus, Apache Watchdog, AWT, CSS, DOM, ECPerf, EJB, HTML, HTTP, HttpUnit, JAAS, JAF, Java IDL, JavaBeans Component API, JavaMail, JAXP, JCA, JCE, JDBC, JFC/Swing, JMS, JMX, JNDI, JSP, JSTL, JSW, JTA, JTS, JUnit, JUnitEE, OTS, RMI, RMI-IIOP, SAX, Servlets, SOAP, TagUnit, WSDL, XHTML, XLink, XML Schema, XPath, XPointer, PostgreSQL, MySQL, Oracle, Microsoft SQL Server, Hypersonic HSQLDB, Adobe FrameMaker, CVS, Jira Issue Management, Jive Forums, ZeroG InstallAnywhere.

Consultant: Confluent Photonics Corporation , Salem, NH. (Aug 2003 – Feb 2004)

- Lightchip RAM-20-200-PSM/PSD Rack Mountable Intelligent 200 GHz DWDM Mux/Demux. The monitoring and control features include optical power detection, traffic-direction LEDs, visual alarms, and craft interface that provides access to the unit's

identification data. The product is a bi-directional dense wavelength division multiplexor (DWDM) with power loss detection on the primary fiber that can trigger alarm LEDs and relays. Integrated power taps allow monitoring of incoming and outgoing signals in the primary fiber.

- Skills: C

Software Director, Optical Wavelength Management Group, Network Management Systems: Digital Lightwave, Incorporated , North Chelmsford, MA. (Oct 1999 – Apr 2003)

Manager, Software Quality & Infrastructure, Systems Engineering Group: Lightchip, Incorporated, Salem, NH. (Oct 1999 – Apr 2003)

- Software Quality Assurance: Responsible for defining SQA needs, implementing a lab environment for testing multiple products, platforms and releases using a collection of highly configurable optical instruments, GPIB instruments and network interfaces. The SQA Lab was a showcase and was considered an essential stop when showing customers our product and engineering capabilities.
- Release Engineering: Responsible for all source code control, release engineering, builds and DCOs.

Principal Software Engineer: Lightchip, Incorporated, Salem, NH. (Oct 1999 – Apr 2003)

- Software architect for the Optical Wavelength Manager (OWM), utilizing StrongARM processors running VxWorks. The OWM monitors power, wavelength and signal-to-noise ratio for multiple channels on dense wavelength division multiplexed networks with programmable alarm thresholds and data logging. Configuration is done remotely or locally through a command line interface (telnet and RS232), SNMP, TL1 and/or Java based graphical user interface.
- Board Support Package for two StrongARM processor boards, using logic analyzers to debug assembler and "C" source code. Worked with technologists at Intel and Wind River to resolve problems encountered with early releases of silicon.
- Comprehensive SNMPv1/v2c MIB for the OWM, including device traps, advanced row creation features, and integration with OEM customers' existing enterprise MIB trees. This MIB was advertised as "the world's first Optical MIB".
- Java GUI for the OWM; a patent application was filed for the GUI.
- Evaluated and selected real-time operating systems, prototype hardware systems and software development tools for bleeding-edge target (Intel StrongARM processor) hardware.
- Skills: Java, C, Expect, Tcl, Perl, bison & flex, VxWorks, Linux, FreeBSD, Solaris, Microsoft SQL Server, SNMPv1/v2c, HP OpenView, SNMPinfo SMICng, InterWorking Labs SilverCreek, SimpleSoft SimpleTester, MG-Soft MIB Browser, Ethereal, SNTP, PPP, SLIP, Microsoft Visual SourceSafe, Concurrent Versions System (CVS), Adobe FrameMaker, ZeroG InstallAnywhere, Rational Team Test, National Instruments Lab Windows/CVI, Apache Web Server, Avensoft PerfectTracker, Intel StrongARM, HP Logic Analyzer, TestPoint for GPIB, RS232, RS485, USB 1.1, PCMCIA.

Principal Software Engineer, Alcatel Internetworking, Voice Over IP: Alcatel Internetworking , Salem, NH. (Aug 1998 – Sep 1999)

- Principal architect for a Voice over IP Gateway for the Enterprise market. The VoIP Gateway supported digital (T1/E1) and analog interfaces. A typical configuration would connect to one or more PBXs to the PSTN and to an enterprise network. Capabilities included fax relay, modem, voice and data.
- Integrated software components for the VoIP blade into existing Alcatel switches.
- VoIP configuration interfaces for signaling, coding, network, dialing plan and hardware.
- Selected and purchased software development tools, telephony products and test equipment.
- Performed system and network administration for a Sun 450 Enterprise Server in the Salem, NH office. Installed and configured development tools and coordinated the build process with teams in Calabasas, CA.
- Coordinated development between teams in the U.S. and Alcatel headquarters in Colombes, France, building an IP-based PBX and other packetized voice products.
- Advised Network Management development team on Java design topics.
- Skills: Java, C, bison, flex; PowerPC 860, TMS320C5xx, SPARC; H.323, ISDN, Q.921/LAPD, Q.931/Call Control, HDLC, RTP, RTCP, UDP, TCP; VxWorks, EST visionICE/visionCLICK, Solaris, Windows/NT; Alcatel IP PCX 4400.

Principal Software Engineer / Software Systems Architect: NBX Corporation , Andover, MA. (May 1997 – Jul 1998)

- System software architecture for an Ethernet based telephone system (NBX 100) with high performance telephony, messaging, and computer integration via a single infrastructure. The NBX system provided a voice and data management platform merging packetized audio with an Ethernet LAN.

- Object-oriented architectures for Call Processing, Voice Mail, Automated Attendant, TAPI Service Provider, Web-based System Administration, and system services layers.
- Selected software tools and components for product development and deployment, including embedded real-time operating systems and object-oriented software development tools.
- Reliable messaging protocols for system controller and DSP-based telephony devices.
- Pioneered development from ObjecTime models to Windows NT (Microsoft Visual C++) simulation environment and Tornado/ VxWorks (Cygnus GNU C++) target environment.
- Skills: Java, C++, C, ObjecTime, ROOM (Real-Time Object-Oriented Modeling), Tornado/VxWorks, IEEE 802.2 Logical Link Control (LLC), IEEE 802.3 CSMA/CD (Ethernet), TCP/IP, H.323, GNU C++, Microsoft Visual C++.

Technical Lead, Advanced Systems, New Technologies & Software Engineering Teams: Oxford Health Plans, Incorporated, Trumbull, CT. (Jun 1995 – Apr 1997)

- Intranet and Internet applications and infrastructure including a "Back-End Server for Intranet Applications" that enabled access to Oracle enterprise databases from web-oriented technologies. Server written in object-oriented Tcl ([incr Tcl]) with Oracle SQL*Net client libraries and handled high-volume database transactions through pooled TCP/IP socket-based connections. The CGI client interfaces used Java, JavaScript, Perl5, Tcl, C, C++ and Korn Shell.
- Secure Internet infrastructure for Electronic Commerce and Electronic Data Interchange systems utilizing technologies including routers, firewalls, demilitarized zones, Secure Socket Layer (SSL), authentication/certificates, Netscape Enterprise Server, VeriSign certificates, Checkpoint/Firewall-1 and Sun Netra Internet Servers. Built a message routing system based on asynchronous Remote Procedure Calls (RPC). Built CGI applications in Java, Perl5, Tcl, C, and C++.
- Optical Character Recognition, Imaging Systems and Handwriting Recognition Systems.
- Provided trouble-shooting for system and network security, configuration and administration groups.
- Skills: Java, JavaScript, Perl5, Tcl, Expect, C, C++, [incr Tcl], Solaris, SunOS, AIX, HP-UX, Pyramid, Microsoft Windows 95/ NT, IBM OS/2, Apple Mac OS 7; Oracle SQL*Net, TCP/IP, RPC, PPP, CVS; HTTP, HTML, CGI; Apache Web Server, Java Applets, Netscape Servers.

Consultant: Quaker Farms Research, Southbury, CT. (Jun 1995 – Dec 1995)

- Projects: Telephone Key System. Embedded system software.
- System and network security, configuration and administration; Internet, DNS & PPP configuration.
- Skills: C, Perl5, assembler & M68K; SunOS, WinNT; DNS, PPP, NFS, NIS, automounter.

Consultant: General DataComm Incorporated, Middlebury, CT. (Oct 1992 – Jun 1995)

- Ported GDC network management applications from HP OpenView/SunOS to HP OpenView/HP-UX and IBM NetView for AIX. This required knowledge of BSD & SVR4 UNIX variants, multi-platform software development environments, SNMP, C ++, X11 window managers, and system & network administration.
- Tool for importing cross-product databases that enabled legacy systems to be managed by GDC's Megaview Network Management System.
- Created an extensible scripting language interface that enabled integration of third party network management protocols into GDC's Integrated Network Management Systems. This interface eliminated the need for Engineering to rebuild and redistribute system binaries to accommodate new protocols and reduced the frequency of software update releases.
- Peer-to-peer network alarm-reporting interface for INMS.
- Skills: C, C++, Perl5, Tcl, Expect; SunOS, AIX, HP-UX, Solaris; SNMP, TCP/IP, RPC, XView, CVS, Informix.

Consultant: Data Switch Corporation , Shelton, CT. (Apr 1990 – May 1994)

- Element Management & Control Systems.
- Ported a real-time control system from PL/M to C for the SunOS Sun386I and SPARC platforms.
- VT100 and IBM 3164 terminal emulators for SunView and X11.
- Network Terminal Server interface over BSD sockets.
- Redundancy and fail-over systems for complex wide area networks.
- GUI for drag & drop port configuration and management.
- Skills: C, PL/M, Perl4, Tcl, Expect; SunOS; TCP/IP, RPC, NFS, NIS, Automounter, X11, XView.

Consultant: IBM T.J. Watson Research Center, Eastview, NY. (Jul 1990 – Aug 1991)

- Project: Servo Controller for a 12-Axis Robotics System; this was a "hard" real-time system.
- Software architecture for the robotics system, a network of INMOS Transputers, with parallel processing and coordination for a 12-axis servo controller.
- Network layer stack for distributing files and messages between Transputer nodes.
- Low level programming, command & data upload/download interface between host programming system and real-time robotics system. GUI to control and monitor robotics system.
- Skills: C, assembler, INMOS Transputer; AIX RS/6000, DOS, OS/2; TCP/IP, NFS, X11, VM/CMS.

Consultant: JANUS Systems, Incorporated, New York, NY. (Feb 1990 – Apr 1990)

- Project: Total Integrated Graphics and Retrieval (TIGER) system for Ameritech Publishing, Inc.
- Skills: C; SunOS 3.5; Sun Tools; SunView; DEC VAX/VMS; RPC, NFS, Automounter.

Consultant: General DataComm Incorporated, Middlebury, CT. (Jul 1988 – Dec 1998)

- Integrated Network Management System: AT&T Accumaster Protocol interface for INMS.
- NetView/PC Alarm Reporting Interface for IBM SNA and multiplexor control system.
- Skills: C, assembler; SCO XENIX & device drivers; IBM NetView/PC; IBM SNA protocols; Informix.

Consultant: IBM T.J. Watson Research Center, Yorktown Heights, NY. (Aug 1987 – Jun 1988)

- Projects: Robotic Fine Positioning Device. Distributed Robotics Communications. Digital Signal Processor Interface for Robotics.
- All embedded software for these devices.
- Skills: C, assembler; Masscomp RTU & device drivers; VMEbus, Multibus, PC/AT bus.

Consultant: Telecomp, Incorporated , Milford, CT. (Oct 1986 – Aug 1987)

- Project: Point-Of-Sale System for Auto Parts Dealers.
- Migrated from NCR UNIX to SCO XENIX.
- Skills: C, assembler; NCR UNIX; SCO XENIX; Motorola 68000; Intel 80286.

Consultant: Pitney Bowes, Norwalk, CT. (Oct 1986 – Jan 1987)

- Project: Manifest Mailing System.
- Prototype system for recharging postage meters using EFT and DES hardware.
- Skills: C, assembler, FORTRAN; SCO XENIX; MS-DOS; DES encryption devices.

Consultant: IBM T.J. Watson Research Center, Yorktown Heights, NY. (Jun 1985 – Sep 1986)

- Project: General Purpose Automation Controller & Programming System.
- Download/debug module for embedded system. Scheduler/dispatcher/messaging for real-time & programming systems.
- Skills: C, assembler; Masscomp RTU & device drivers; Motorola 68020; Multibus, RCS, VM/CMS.

Consultant: Digitech Industries, Incorporated, Ridgefield, CT. (Aug 1984 – Jul 1985)

- Project: Network Protocol Analyzer. Event programming language for embedded real-time system.
- Skills: C, assembler; MS-DOS, CP/M-68K; Motorola 68000; VMEbus, protocol analyzers.

Consultant: Telecomp, Incorporated , Milford, CT. (May 1984 – Nov 1984)

- Project: Point-Of-Sale System for Auto Parts Dealers.
- Skills: C, assembler, NCR UNIX.

Senior Software Engineer: Dictaphone Corporation, Norwalk, CT. (Mar 1982 – Apr 1984)

- Projects: Digital Voice Operating System. Dictation Control and Management System.
- Skills: C, PL/M & assembler; UNIX V6, V7, System III on DEC PDP-11 and VAX; Intel 8085, SCCS.

Vice President, Consulting Services: InfoSoft Systems, Incorporated, Westport, CT. (Jul 1978 – Mar 1982)

Consultant: Control Process, Incorporated, Plantsville, CT. (Jul 1978 – Mar 1982)

- Projects: Embedded process control systems.
- Skills: C, assembler, Zilog Z80, CP/M; DEC RSX-11S/M; Data General Nova/Eclipse RDOS.

Consultant: Learning Unlimited, New Canaan, CT & Research Triangle Park, NC. (Jul 1978 – Mar 1982)

- Project: Prescription-based Learning System.
- Skills: FORTRAN, PL/1, assembler; Data General Nova/Eclipse RDOS; IBM TSO, OS & DOS.

Consultant: Sales Maids of America division of GELCO, Southport, CT. (Jul 1978 – Mar 1982)

- Projects: Payroll System. Point-Of-Sale Data Collection System.
- Skills: COBOL; Data General Nova/Eclipse RDOS & ICOS.

Consultant: PR Data Systems, Wilton, CT. (Jul 1978 – Mar 1982)

- Projects: Press Release Distribution System. Mailing List Maintenance System.
- Skills: COBOL; Data General Nova/Eclipse RDOS & ICOS.

Consultant: Mnemonics Incorporated, Norwalk, CT. (Jul 1978 – Mar 1982)

- Project: Market Tabulation System.
- Skills: FORTRAN, PL/1; Data General Nova/Eclipse RDOS.

EDUCATION

Bachelor of Arts in Computer Science: Indiana University, Bloomington, IN. (Sep 1975 – May 1978)

PROFESSIONAL CERTIFICATION

Sun Certified Java Developer (SCJD) • Sun Certified Java Programmer (SCJP)

PATENTS

Recording and Dictation System, United States 4621350, Issued November 4, 1986

PROFESSIONAL ASSOCIATIONS

USENIX Association • League of Professional System Administrators (formerly SAGE)

TECHNICAL SEMINARS

Mirantis: OpenStack Bootcamp • USENIX: System & Network Security • Wind River Systems: VxWorks & Tornado

HONORS AND AWARDS

Cornell Society of Engineers "Ingenuity in Science and Mathematics Award," 1976.

TECHNICAL SKILLS

Programming Languages: C, C++, Java, Go, Ruby, Python, Perl, Node.js, Tcl/Tk, Expect, AWK, JavaScript, yacc & lex, assembly languages.

Professional Certification: Sun Certified Java Developer (SCJD), Sun Certified Java Programmer (SCJP).

Config Management: Chef, Vagrant, Berkshelf, Ansible, Rundeck, CFEngine.

Virtualization: Docker (containers), KVM (kernel-based virtual machines), VirtualBox, VMware ESXi.

Hybrid Cloud & MaaS: Amazon Web Services - Elastic Compute Cloud (EC2), Cobbler, Fog.

Release Engineering: GitHub Enterprise, GitHub, Apache Subversion, Perforce, Mercurial, IBM Rational ClearCase, Concurrent Versions System (CVS).

Operating Systems: Ubuntu Linux, Debian Linux, CentOS Linux, Scientific Linux, FreeBSD, NetBSD, Red Hat Enterprise Linux, Fedora Linux, Embedded Linux, SuSE Linux, Sun Solaris, ExpressLogic ThreadX, Enea OSE, Wind River VxWorks, IBM AIX, HP HP-UX, Microsoft Windows.

Database Engines: Apache Cassandra, PostgreSQL, MySQL, Microsoft SQL Server, Hypersonic SQL, PostgreSQL, Oracle, IBM Informix, IBM DB2.

Network Management: SNMP MIB design & agent development, SNMP verification, HP OpenView, IBM Tivoli NetView.

Network Routing: Juniper JunOS, pfSense, Cisco IOS, SonicWall Firewalls, LACP, BFD, OSPF.

Network Protocols: TCP/IP, UDP/IP, Socket Programming, Domain Name System (DNS), Dynamic Host Configuration Protocol (DHCP), Simple Network Management Protocol (SNMP), Secure Shell (SSH) & OpenSSH, Secure Sockets Layer (SSL) & OpenSSL, Lightweight Directory Access Protocol (LDAPv3), Simple Mail Transfer Protocol (SMTP), Internet Message Access Protocol (IMAP), Simple Network Time Protocol (SNTP), Voice over IP (VoIP), IP Multimedia Subsystem (IMS), PacketCable 2.0, Media Gateway Control Protocol (MGCP), Network-Based Call Signaling (NCS), Session Initiation Protocol (SIP), Signaling System #7 (SS7), Point-to-Point Protocol (PPP), ISDN Q.921/LAPD, ISDN Q.931/Call Control, High-level Data Link Control (HDLC), IEEE 802.2 Logical Link Control (LLC), IEEE 802.3 CSMA/CD (Ethernet), X11 Window System, Network Information Service (NIS).

Web Services & Content: nginx, Apache HTTP Server, HyperText Transfer Protocol (HTTP), XML-RPC, HyperText Markup Language (HTML), Cascading Style Sheets (CSS).

Web Performance & QA: JUnit4, HttpUnit, Apache JMeter, Apache Cactus, ECPerf, JUnitEE, TagUnit, Apache Watchdog.

Java Technologies: Apache Ant, Eclipse, Hibernate, XDoclet, Apache Log4j, Java Management Extensions (JMX), Java Service Wrapper (JSW).

Java Web Services: JBoss, Apache Tomcat, Java Servlets, Java Server Pages (JSP), Java Server Pages Standard Tag Library (JSTL), Java API for XML Processing (JAXP).

Java 2 Standard Edition: Java Naming and Directory Interface (JNDI), Java Database Connectivity (JDBC), Java Authentication & Authorization Service (JAAS), Java Cryptography Extension (JCE), Java Foundation Classes (JFC/Swing), Java IDL, Java Remote Method Invocation (RMI), JavaBeans Activation Framework (JAF), JavaBeans Component API, Abstract Window Toolkit (AWT).

Java 2 Enterprise Edition: Enterprise JavaBeans (EJB), J2EE Connector Architecture (JCA), Java Message Service (JMS), Java RMI over IIOP (RMI-IIOP), Java Transaction API (JTA), Java Transaction Service (JTS), JavaMail, OMG Object Transaction Service (OTS).

XML Technologies: Document Object Model (DOM), Simple API for XML (SAX), Extensible Markup Language (XML), Extensible HyperText Markup Language (XHTML), XML Schema, XML Path Language (XPath), XML Pointer language (XPointer), XML Linking Language (XLink), Extensible Stylesheet Language (XSL), XSL Transformations (XSLT), XSL Formatting Objects (XSL-FO), Apache Xalan XSLT processor, Apache Xerces parser, Saxon XSLT processor.

Object-Oriented Tools: IBM Rational Rose RealTime, Real-time Object-Oriented Modeling (ROOM).

Defect Tracking: Jira Issue Management, IBM Rational ClearQuest, Bugzilla, Jive Forums.

Other Tools: Adobe FrameMaker, DejaGnu, ZeroG InstallAnywhere.

Other Languages: PostScript, PL/M, FORTRAN, COBOL, PL/1, Pascal, LISP, BASIC.

Microprocessors: Intel x86, Atmel SAM9G (ARM), MIPS32, Freescale MPC8548, Freescale MPC7410, Intel StrongARM, Freescale MPC860, Freescale MC680X0, Sun SPARC, Zilog 80180, Intel 8051 Microcontroller.