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Summary and Overview

Summary:	Senior Technical Manager at EssilorLuxottica USA, leading the PMS Integration Team, with 40+ years of full life-cycle software architecture, design and development. Builds applications with large language models such as Claude, ChatGPT, Gemini and Copilot, and mentors developers on using AI to build software.
Years Experience:	40+ years of diverse software design and development that includes project management, project architecture, team leadership and technical mentoring. 2 years computer operations, 2 years Systems Analysis, USAF
Oper. Sys:	Windows; Azure Cloud Services; Unix; Linux; Cygwin; OS400 (AS400); AIX; CICS Command and Macro level; Unisys Exec; IOS
Hardware:	Intel; AMD; HP; IBM mid-size and large
Languages/ • APIs:	C#; R, VB.NET, ASP.NET, ASP.NET Core, ASP.NET MVC, JSON, Angular, React, VueJS, Node, ChartJS, SignalR, DataTablesJS, Azure Data Factory, Objective-C, Entity Framework; SSIS, SSRS; WIX; Ajax; CSS; HTML; Java and Java Swing; J2EE (EJB); JSP; C++; C; Visual C++ and MFC; ASP; JavaScript; Knockout; JQuery; HL7; Windows Script Host; SNMP; Native Win32 SDK; ANT; JUnit; NUnit; XSLT; XML; SQL and ODBC; JDBC; Microsoft COM; 80X86 Assembler; Lisp; Perl; TCL/TK; IBM 370 Assembler; PL/1; COBOL; Pascal; FORTRAN; S/MVS and DOS VSE JCL; APL; REXX; CLISTS; BASIC; EASYTRIEVE
Design and Architecture:	Visio; Enterprise Architect; UML; Object-Oriented Analysis and Design; SCRUM, eXtreme Programming (XP); Design Patterns; Feature Driven Development (FDD)
Databases:	SQL Server; Oracle; IBM DB2 Access; MySQL; ISAM; VSAM
Device Drivers:	Windows Driver Model
Specialized Experience:	Large language models (Claude, ChatGPT, Gemini, Copilot) and AI-assisted development; Test-driven, Agile development coaching, consulting and mentoring; Porting ASP to ASP.NET; Work flow; Predictive Analysis and Machine Learning, Expert Systems and Business Rules Engines; Chatbots, Object Oriented Analysis; Design and Development; Distributed/networked applications; Code Generation; Service Oriented Architecture (SOA)
Security Clearances Held:	Secure Compartment Information (SCI) Top Secret (Inactive); National Agency Check (NAC)
Certifications:	Anthropic: Claude 101, Claude Code 101, Introduction to Claude Cowork, Introduction to Subagents (2026); Microsoft Certified: Azure AI Fundamentals (2024)
Professional Articles and Code Samples:	For articles and code I've authored that provide tips, education and practical guidance for all phases of the software development life cycle, see: my website and Github .

Career History

- | | | |
|---|--------------------------------|------------------------|
| March 2024 – Present | EssilorLuxottica USA | Dallas, Tx |
| <ul style="list-style-type: none">• Senior Technical Manager• Manage the PMS Integration Team• Build applications with large language models such as Claude, ChatGPT, Gemini and Copilot, and mentor developers on using AI to build software• Promoted from Lead Software Developer | | |
| March 2021 – March 2024 | EssilorLuxottica USA | Dallas, Tx |
| <ul style="list-style-type: none">• Lead Software Developer• Led development for the 4PC Features Team | | |
| December 2020 – March 2021 | Zachary Piper LLC | Plano, Tx |
| <ul style="list-style-type: none">• Full stack Software Engineer contracted to Omnicell, Inc.• Member of Rapid Response responsible for the development and testing of new and existing web applications (ASP.NET/MVC/C#/Angular/Azure Cloud Services/ Azure Data Factory/HTML/CSS/SQL Server Stored Procs) from layout to function and according to requirements• Test-driven development in an agile methodology using Azure DevOps | | |
| December 2018 – December 2020 | NHRG Technical Services | Austin, Tx |
| <ul style="list-style-type: none">• Full stack Senior .NET developer contracted to Texas Real Estate Commission• Developed multiple web and desktop applications using ASP.NET MVC, C#, ASP.NET Core, React, Python, WebAPI, WSDL Web Services, SQL Server, Oracle, VueJs, JavaScript, JQuery, JSON. Highlights include:<ul style="list-style-type: none">○ Converted Expanded Background Check application to an internal web application. JQuery, JavaScript, C#, VueJs, Oracle○ Created Renewal Education page for TREC main site JQuery, JavaScript, C#, VueJs, Oracle○ Created Windows service for monthly report showing Education Providers in VERSA.○ Created Windows service for quarterly FTP file exchange with Texas Guaranteed Student Loan Service○ Created various dashboard web applications using React/Redux/ChartJS/SignalR○ Created Windows service to monitor up/down time for the VERSA application using ChatJS○ Created several AI Chatbots using DialogFlow○ Created Web pages to help users with forgotten user ids and passwords○ Created Production Rule System to determine convictions from criminal histories○ Created in-house IT Portal using ASP.NET/MVC/Razor/Javascript/Oracle/SqlServer/Azure Active Directory• Test-driven development in an agile methodology | | |
| February 2018 – November 2018 | Randstad | San Antonio, Tx |
| <ul style="list-style-type: none">• Senior developer contracted to Moody's Analytics, assigned to USAA• Created internal data analytics .NET web application for the Chief Credit Risk office to evaluate and assess credit and market risk for USAA's financial interests• UI composed of multiple charts, graphs, and tables implemented using custom JavascRipt/JQuery, ChartJS, DataTablesJS and VueJs (similar to Angular and React)• Backend and database implemented using WebAPI, C#, LINQ, IBM DB2, JSON• Charts and tables exported to EXCEL using the EPPlus library• Test-driven development in a SCRUM methodology | | |
| March 2016 – June 2018 | TherapyTrak (startup) | Austin, Tx |
| <ul style="list-style-type: none">• <i>Note: This was a side project worked on after normal work hours</i>• Chief architect and lead developer• Azure hosted web application to track client progress in chemical dependency treatment• C#/ MVC/Razor/ JQuery/JavaScript/Ajax/Sql Server/Redis NoSql cache | | |
| March 2014 – January 2018 | NHRG Technical Services | Austin, Tx |
| <ul style="list-style-type: none">• Contracted to Texas Health and Human Services• Technical lead and solutions architect for the agency's web application that records all business related to travel authorizations, travel advance requests, and travel claims. C#/ MVC/JQuery/JavaScript/Ajax/ Oracle/DevExpress/Telerik reports, Remedy.• Mentored/trained all developers in Test Driven Development (TDD) including TDD philosophy and best practices in an Agile, continuous integration environment; provided unit test case examples as templates for developers to create their own.• Utilized MOQ plugin to create database mocking objects for database unit tests• Used SCRUM board and burn down graph to communicate schedule status to management and other teams | | |

- Insured code consistency and efficiency using code walkthroughs
- Designed and developed HHSCIT Statistics System that tracks and reports project hours by accounting codes. C#/MVC/JQuery/JavaScript/ Ajax//Oracle /Telerik Reports and MS Report Viewer
- Extended and enhanced Client Trust Fund. C#/ASP.NET/JQuery/JavaScript/ Ajax/Oracle/Telerik Reports
- Extended and enhanced Audit Tracking System and Performance Management Dashboard web applications. VB.NET/JavaScript/Oracle/Microsoft ReportViewer

November 2013 – March 2014

TiPS, Inc.

GeorgeTown, Tx

- Independent consultant responsible for design, architecture and implementation of commercial multi-tasking, multi-threaded industrial alarm management software on the Windows and Web platforms.
- Designed and developed real-time, publish-subscribe pattern using SQL Server update trigger and MSMQ to maintain cache values when tables were updated
- Collaborated with QA to test and produce a self-installing commercial package
- C#, .NET 4.0 and Task Library, DCOM, SQL Server 2005/2008, Visual Studio 2010/2012, Windows Forms, MSMQ
- Implemented Test Driven Development (TDD) unit test cases and MOQ to verify code quality during continuous integration check-ins.

August 2013 – Present

Austin Texas Okinawan Karate

Austin, Tx

Ongoing project for local business

- Architect and senior developer responsible for creating and maintaining karate web site.
- Mentored junior developer in all phases of software development and Test Driven Development (TDD) best practices.
- Layered architecture using VB.NET, .ASP.NET 5, SQL Server 2012, Visual Studio 2013, LINQ, HTML, CSS, JQuery

August 2013 – November 2013

NextGen HealthCare

Austin, Tx

- Senior Software Engineer and Tech Lead on Integrations Team responsible for integrating four hospital applications
- Heavy database work using advanced stored procedures, synonyms, triggers, and functions on SQL Server 2005/2008
- Also, C#, .NET 4.0, Visual Studio 2010/2012, Mirth, Roseta, HL7, Windows Services, ProvideX

February 2013 – August 2013

Technology Navigators

Austin, Tx

- Contractor at TiPS, Inc. solely responsible for re-architecting and developing, a commercial multi-tasking, multi-threaded, multi-core Windows Service to monitor OPC DA servers and generate notifications of changing alarm values and states. Upon user approval the software would write attribute values back to the OPC DA server
- Worked with company owner on solutions, blockers and other technical challenges
- Created unit tests for Test Driven Development in a continuous integration environment
- Collaborated with Quality Assurance (QA) to create integration tests.
- Restructured and extended the Windows form based UI that configured the software
- Created an XML based rule set and rules engine to identify and discover alarm attributes on OPC servers and write their values to a knowledge database.
- Rewrote the Installaware setup script
- C#, .NET 4.0 and Task Library, SQL Server 2005/2008, Visual Studio 2010/2012, DCOM, Windows Forms, MSMQ

March 2012 – February 2013

Matrix

Dallas, Tx

- Contractor at ADT Security Services responsible for developing, extending and creating customized web and desktop applications using Microsoft/Windows technologies such as C#, ASP.NET MVC3, Razor, JQuery, Knockout, AJAX,WCF and SQL Server 2008, 2005, 2000, DTSI and SSIS Packages
- Technical lead and Solutions Architect for the Corporate Applications Group responsible for migrating 80+ applications, including corporate HR data, from Tyco to ADT. Responsibilities included project management, planning disaster recovery, designing and documenting architectures, driving best practices for coding and Test Driven Development (TDD) and collaborating with multiple internal team leads, managers and ADT leadership
- Technical lead for the Electronic Daily Timecard application. C#, ASP.NET MVC3/MVC4, Razor, JQuery, SQL Server 2008

January 2012 – April 2012

Oxford International

Dallas, Tx

- Contractor at PRISM Services responsible for maintaining, extending and creating customized web applications that search for health care provider using C#, ASP.NET MVC3, Razor, JQuery, AJAX,WCF and SQL Server
- Proactively identified tools and technologies that would aid in TDD and development efforts and implement solutions.

December 2010 – January 2012

Aquire Solutions

Irving, Tx

- Custom software developer responsible for creating customized human resource web applications for Aquire customers using Sql Server 2005/2008, Ruby, Powershell, C#, Silverlight, Entity Framework, JSON, RIA, WCF, ASP.NET and ASP.NET MVC
- Developed build and setup scripts using Windows Installer XML (Wix) and PowerShell

- Developed reports using SQL Server 2008 R2 Reporting Services
- Developed in-house utilities using WPF

March 2009 – November 2010

P2Solutions

Frisco, Tx

- Chief architect and senior developer responsible for developing www.reservefishing.com web site using Silverlight 4.0, ASP.NET 4.0, ASP.NET MVC, WCF, C#, Sql Server 2008 and Entity Framework
- Project architect and senior developer responsible for designing, architecting and implementing a multithreaded, real-time, smart client/server application for Temporary Housing Directory. C#. NET 3.5, Winforms, WPF, Web services, Windows Services, WCF, SQL Server 2008
- Implemented TDD in an Agile Methodology
- Rewrote P2Solutions web site to use C# and ASP.NET
- General IT support for P2Solutions

November 2008 – March 2009

Rapp Collins

Irving, Tx

- Software Engineer responsible for maintaining, enhancing, and extending retail management tool that generates advertising print pieces (flyer's, coupons, postcards, etc.) and web sites.
- C#. NET 2.0/3.0/3.5, ASP.NET. Winforms, WPF, Web services, WCF, SQL Server 2005, SharePoint

April 2008 – November 2008

Netwatch Solutions, Inc.

Dallas, Tx

- Software Architect and technical lead developer responsible for technical vision, direction, architecture and implementation of flagship product line
- Designed, modeled and architected multi-threaded, enterprise, n-tier software agent using Windows Communication Foundation (WCF) web service hosted in a Windows service and exploiting C#, .NET 3.5 SP1, LINQ, MSMQ, SQL Server 2005.
- Developed Winform clients in C# using Window Presentation Foundation (WPF) and XAML
- Developed Winform clients in C# using ASP.NET MVC Framework and ADO.NET Data Services and Representational State Transfer (REST)
- Enhanced and supported Asp.NET Winform administrative client in VB.NET
- Enhanced company's flagship ASP.NET Web application to communicate with WCF web service
- Mentored junior developers in all phases of the SDLC including Test Driven Development (TDD) algorithms, agile methodology, design patterns, and UML

November 2007 – April 2008

Matria Healthcare, Inc.

Dallas, Tx

- Senior Systems Engineer responsible for enhancing existing product line
- Architected, modeled and developed password security policy using strong passwords, dictionary and personal information filtering
- Analyzed business requirements and produced functional specification
- Produced enterprise n-tier architecture model using UML
- Implemented in C#.ASP.NET using Test Driven Development (TDD) methodology
- Produced unit test cases in NUnit
- Created 800K word dictionary in SQL Server table

April 2005 – November 2007

Diversified Technology Systems, Inc.

Randolph AFB, Tx

- Introduced and established test-driven, peer reviewed, agile development methodology
- Coached ELSG/PNSWV developers to adopt Agile principles, practices and tools
- Converted single sign-on solution (SSO) to C#, HTTPModule to authenticate and authorize web (WebForm) users
- Introduced, and implemented unit test case methodology using NUnit
- Mentored and coached developers in all phases of software engineering including object-oriented design and development
- Introduced and established design modeling using UML
- Insured Test Driven Development (TDD) and development implementation adhered to continuous integration and delivery schedule
- Improved user relationships and synergy between technical groups by promoting and following agile principles
- Established technical vision and software architect to convert legacy Virtual Military Personnel Flight System (VMPF) from VB6/ASP to Enterprise architecture using C#/ASP.NET 2.0/Ajax/Dependency Injection/Design Patterns/SQL Server 2005/Oracle 9i
- Developed an ASP to ASP.NET 2.0 Integration Bridge that allows session variable sharing between the ASP and ASP.NET.
- Architected, modeled and implemented framework infrastructure for VMPF ASP.NET modules that increased performance and throughput of web applications
- Developed Visual Studio project template specialized for VMPF Modules
- Designed and developed prototype Service Oriented Architecture (SOA) using Team Edition for Software Architects, C# and Web services for next generation Virtual Military Personnel Flight System

November 2004 – April 2005**Texas Education Agency****Austin, Tx**

- Mentored and trained TEA development teams to use an agile, iterative development methodology
- Led design sessions to teach agile modeling, Test Driven Development (TDD), UML diagramming, software architecture and development methodology
- Identified TDD tools – such as NUnit – to create unit test cases
- Promoted and demonstrated the value of using software design patterns
- Architected, designed and developed working prototypes for a component based,, Model Driven Development architecture to generate C# source code from UML models
- Authored technical papers that proposed technical design and development strategies to management
- Utilized application blocks in Microsoft Enterprise Library to promote reusability, maintainability and a consistent programming model

March 2004 - October 2004**Lockheed Martin****Randolph AFB, Tx**

- Established development methodology using agile principles
- Mentored development team in design modeling using UML, code quality using Test Driven Development (TDD), and code consistency with peer reviewed code reviews and walkthroughs
- Architected, designed and developed Data Access Layers of n-tier Manpower application using UML, VB.NET, XML Web Services, Reflection and .NET Remoting objects, ADO.NET and the Oracle ODP.NET driver
- Architected, designed and developed single sign-on solution (SSO) to authenticate and authorize desktop (WinForm) users
- Developed web service to integrate desktop and web applications
- Architected, designed and developed Web and Desktop Presentation layer applications to retrieve data from Data Access Layers
- Architected, designed and developed caching algorithm based on Adaptive Replacement Cache theory
- Packaged .NET Remoting objects as Windows Services
- Provided .NET technical guidance to team members

April 2002 – February 2004**Integrated Computing Systems****Lockhart, Tx**

- Sole proprietor, Chief Architect and Developer
- Coaching and mentoring in Agile methodology and eXtreme Programming
- Internet and E-Commerce development using C#, C++.Visual Basic, VB.NET, ASP.NET, ADO.NET, Java, J2EE, WebSphere, osCommerce, MySQL, SQL Server, Oracle
- Web site design and development using HTML, JavaScript, Flash, XML/XSL, CSS, PHP, CGI
- Network and System administration
- Developed and licensed the following commercial programs:
Shots! The Image Database - Photography software that recorded shot information
Visual C++ Tools (*VCTools*) – Programming tools to make Visual C++ programmers more productive
- Contracts included but were not limited to:

February 2004Wasp Bar Code Technologies, Inc.Plano, Tx

- Bug fixes and enhancements to MobileInventory and MobileAsset applications
- .NET, C# Winforms using ADO.NET, Sql Server and SQL-DMO (to remotely backup and restore database from client).
- Used .NET Reflection API and Metadata to dynamically create GUI components
- Customized Tree and DataGrid controls

December 2003 – January 2004Borrowed Time, Inc.Austin, Tx

- Ported low level C/C++ network programs from Linux to Windows using Cygwin environment
- Used Standard Template Library and GNU Build Tools (autoconf, automake, etc) for portability
- New development of Windows Win32 agent that monitors and maps executing processes to open network connections

October 2003 – DecemberTexas School For The Blind and Visually Impaired Austin, Tx

- Developed multi-threaded Java Swing GUI connecting to DB2 database
- Implemented multiple inheritance using Java Interfaces
- Converted DB2 tables to proprietary format using Java and JDBC

August 2003 – October 2003KSolutions Inc.Irving, Tx

- Microsoft funded project to create a community Web Portal site using Microsoft SharePoint Portal Server
- Developed multiple C#, ASP.NET pages that connected to customized SQL Server database using ADO.NET
- Developed stored procedures

May 2003 – August 2003

- Web site design, development and maintenance
- Ecommerce using ASP, VBScript, and SQL Server

December 2001 – April 2002

Emergisoft Corp.

Arlington, TX

- Oracle to DB2 conversion on AS400 from Windows to AS400
- Converted Oracle PL/SQL, Triggers, Procedures, Packages, Schema to DB2 equivalents
- Installed, configured and administered Oracle and DB2 databases
- Maintained legacy software written in C
- Authored Clinical Context Object Workgroup Functional specification for flagship product
- Authored survey of Software License Managers and recommended a Licensed Manager for flagship product

January 2001 – November 2001

EmSTAT Corp.

Austin, TX

- Responsible for the architecture, technical direction, development and management of the EmSTAT XML driven real-time, Emergency Room Charting and Tracking application
- Established eXtreme Programming methodology
- Introduced and mentored team in design modeling in UML
- Trained and mentored developers in Java, XP practices and software engineering
- Developed and implemented test driven methodology and procedures using JUnit and ANT
- Introduced, developed and implemented software design methodology in eXtreme Programming (XP)
- Introduced, developed and implemented tracking tools and reports to the management team that tracked programming team's productivity (velocity in XP)
- Worked with customer representatives to develop user stories for development using the XP methodology
- Introduced, developed and implemented software design patterns and UML diagrams into development practices
- Responsible for development and maintenance of HL7 formatted data interchange and integration with clinical partners and labs
- Used the Clinical Context Object Workgroup (CCOW) HL7 protocol to implement single sign-on (SSO) and to integrate patient data context across disparate applications
- Developed and implemented 100% Pure Java, multi-threaded, XML-driven distributed Swing client connected to an Oracle database
- Developed and implemented .NET, C# WinForm client to research new technological direction along with XSLT, SOAP, WSDL
- Converted legacy Java 1.0 and AWT implementation of client application to Java Standard Edition 2 (1.3) and Swing
- Developed and implemented Quality Analysis procedures using automated tools
- Interacted with customers on site
- Developed project schedules and time estimates
- Set corporate direction with management team

March 2000 – January 2001

Synchronicity Corp.

Austin, TX

- Member of Technical Staff and senior lead for object oriented analysis, design and development of distributed Java applications
- Responsibilities included new development of Java applications and utilities that supported the flag-ship product. Included the port of the legacy C++/MFC user interface to Swing
- Introduced and championed UML and Software Design Patterns to programming staff
- Introduced and championed eXtreme Programming (XP) to programming staff
- Architected, designed, and developed 100% Java client application that graphically depicted file dependencies using Java 2D that executed on Windows NT, Windows 9x, Sun Solaris and HP-Unix
- Along with Chief Technology Officer and other senior staff, planned and designed rewrite and rearchitecture of legacy C++/MFC server application to Java Enterprise Edition (J2EE)
- Researched and experimented with various application servers including WebSphere and Voyager

January 1999 – March 2000

Cisco Systems

Austin, TX

- Team leader for the ViewRunner for Windows SNMP, TCP/IP, C++/MFC application that managed a Cisco 6100 Digital Subscriber Line (DSL) Access Multiplexer
- Designed and developed a Java Swing Applet to coordinate source code configuration management in a distributed development environment
- Proposed and designed rewrite of ViewRunner to Java and Swing. Management approved but it was not implemented due to contract expiration
- Tracked productivity of programming staff and reported to management
- Developed project schedules and time estimates
- Mentored and educated programming staff in algorithms and software engineering techniques
- Additional responsibilities included bug tracking, setting project direction, conference calls with customers and coordinating with other groups

September 1998 – January 1999**IBM Corp.****Austin, TX**

- Set up the UCD group's Software Development Laboratory to simulate an OEM environment in which to evaluate the JavaOS operating system to Windows NT Terminal Server
- Responsibilities included requirements analysis of needed hardware and software as well as installation and administration for Sun Solaris, IBM AIX and NT Server on local Ethernet and token ring networks
- Developed and implemented Java applications that executed on JavaOS and compared them to equivalent applications on Windows NT Terminal Server using a set of weighted metrics which I developed
- Development included Java applets, JavaBeans, JNI, and standalone Java applications that communicated with device drivers and native method interfaces written in Assembly Language, C++, and MFC
- Developed in-house chat application written in 100% Java
- Authored comprehensive technical report that recommended a market position for IBM concerning JavaOS

August 1997 – September 1998**SPEC Corp.****Austin, TX**

- Architected, designed and developed advanced research and development software that tracked and monitored missions for the U.S. Air Force. The main application consisted of a Java client user interface that utilized a native method that interfaced to a customized AI expert system along with a software component that predicted an aircraft's position given the aircraft's heading, speed, fuel and latitude/longitude. The front-end user interface was written entirely in Java while the back-end expert system was written in C and C++/MFC. CORBA and JDBC were used for remote communications with other components and the database
- CDT (Cockpit Display Terminal) - Multi-communications messaging system that resides in an aircraft to transmit mission status information. Multiple software components written in C++/MFC on Windows NT/9x and C on Unix. COM and TCP/IP to deliver the message.
- Intelligent Flight Dispatch Server (IFDS) - Provided technical expertise for the intelligent flight dispatch management and message delivery system using satellite, radio and land earth station communications for the U.S Air Force. Written in C/C++ and executes on Windows NT/9x and Sun Solaris
- Designed and developed a TCL\TK administration interface to the IFDS server
- Expeditionary Forces Experiment (EFX) - Developed Windows NT/9x Shell application that uses Remote Access Services (RAS) to connect to an Internet Server using TCP/IP to send mail via SMTP. This application was used with a satellite phone system to send email via satellite. Written using MFC and RAS API, in C and C++
- Developed Serial port Virtual Device Driver (Vxd) for Windows 95 for use with IFDS. Written in C++ and Assembler
- Developed a Windows 95 DLL encapsulating the Win32 Communications API to be used for high-frequency radios using C++/MFC
- Designed and proposed an Intelligent Software Agent system using techniques from Linear Algebra and Machine Learning to the U.S. Air Force. Intended to be used with DCOM and CORBA

November 1995 – July 1997**AMD Corp.****Austin, TX**

- Member of Advanced Research and Development/Advanced Architecture Lab
- Architected, designed, designed and developed C++, command line driven behavioral and statistical performance model that virtualized a personal computer including system level components such as a PCI bus, memory controller and an L2 cache.
- Simplified the complex command line syntax of the PC modeler into a single Java GUI form for Windows NT, Windows 95, HP Unix, and Sun Unix platforms
- Developed a C++ tool that generated 80x86 bus cycles based on statistical parameters which was configured by a Java based GUI. This tool was used within AMD to generate bus cycles from hardware specifications
- Proposed, designed, lead and developed an AI Expert System prototype of an 80x86 Engineer. This expert system contained 80x86 behavioral knowledge. The user interface was HTML and the application was C++
- Developed complex programs in assembly language to verify 80x86 compatibility on the K-5 microprocessor and researched and reversed-engineered Pentium behavior. These programs interacted directly with the processor to investigate paging (4K and 4M), cache coherency, external inquiries (snoops), interrupts/exceptions, and the various modes of the hardware; protected, real, SMM, VM86, SuperReal. The results of my research identified bugs and differences in the K5 processor from the Pentium that directly led to the modification of the K5 design. C and Assembly language
- Designed, developed and maintained Intranet Web pages that integrated Java applets and CGI applications
- Developed tools and techniques that improved the verification process at AMD.

July 1994 – November 1995**BMC Software Corp.****Austin, TX**

- Architected, designed and developed client-server software to execute in the multi-platform Enterprise environment. Platforms included Windows, UNIX and IBM MVS using DB2, ORACLE, SYBASE, IMS and VSAM data sources. Languages used were C, C++/MFC and 370/Assembler
- Developed and maintained low-level access mechanisms to DB2 internal data structures and objects
- Designed software that converted a relational database schema to a hierarchical structure (and back to relational) for transportation across networks
- Developed new releases and maintained BMC's Copy Plus product (very low-level coding using MVS internals, 370/Assembler and C/C++) Included low-level work with DB2

July 1993 – July 1994

Tandy Corp.

Ft. Worth, TX

- Lead CICS Systems Programmer
- Responsible for the support, administration and configuration of CICS
- Mentored application programmers in algorithms, program design, CICS concepts and CICS pseudo-conversational programming requirements
- Authored several papers on data stream analysis and event-driven programming

September 1991 – July 1993

Viasoft Corp.

Phoenix, AZ

- Software Developer, CICS, IBM Assembly Language, Pascal, C, C++, COBOL

November 1990 – September 1991

Dallas Systems Corp.

Dallas, TX

- Provided technical analysis and initial coding in C and developed UNIX scripts to convert company's on-line warehouse system to UNIX platform
- Assisted in new COBOL development of an embedded on-line warehouse management system utilizing RF frequency terminals

August 1986 – November 1990

Aviall Corp.

Dallas, TX

- Systems Programmer/Applications Programmer Analyst

March 1984 – August 1986

EDS Corp.

Dallas, TX

- Systems Engineer, Health Care, Blue Cross Blue Shield
- COBOL and 370/Assembly applications

February 1983 – March 1984

Garland ISD

Ft. Worth, TX

- Programmer, COBOL, Unisys Assembly Language

Education:

Angelo State University at San Angelo, Texas
General undergraduate work
1977

Richland College at Dallas, Texas
Undergraduate work in computer science and mathematics
1980

Electronic Data Systems at Dallas, Texas
System Engineering Development courses
1984

PKI Basic Training Fundamentals of Public Key Infrastructure Online
USAF/PKI/SPO 2004

Various Technical classes by IBM, Amdahl, and others

Military: Honorable Discharge - U.S.A.F. 1980