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| ***Personal Info*** <br> *(6-6-2024)* | **Don Stegall** <br> 606 Ivah Lee Way <br> Monroe, NC 28110 <br> Mobile Phone: 980-269-4664 <br> don.f.stegall@gmail.com <br> FaceTime: 980-269-4664 <br> WhatsApp: 980-269-4664 <br> Skype: donstegall |

***Professional Profile***

Seasoned professional designing and programming software and hardware systems in a variety of markets. Have managed large and small team development and design efforts, including mentoring. Broad range and depth of programming language and technology experience in contracting and full-time positions.

***Professional Experience***

*2012 - Present*

**Personal Development**
- Software and Database Development, Software System Architecture, Media Production

**Accomplishments**
- Development of web apps with Blazor and thick apps with Blazor Hybrid with MAUI sharing high percentage of UI
- Extensive use of JavaScript and TypeScript UI frameworks
- Development of mobile apps using Angular and React in web browser and Ionic Framework environment
- Development of multiple Android applications in Java published to Google Play Store starting in 2012
- Development of apps for iOS and macOS using Objective-C and Swift in Xcode
- Development and publishing of Windows UWP app on Windows Store (Drill Bit Charts Pro)
- Development of web apps with all versions of ASP.NET MVC
- Development and deployment of RESTful API's and microservices using C#, Python, Go, etc, on Azure, AWS, GCP

*7/17/23 - 2/29/24*

**Bank of America, contractor**
- Software Development in Global Wealth Investment Management Software Services

**Responsibilities / Accomplishments**
- Documentation and diagramming of a legacy web service in C# with WCF and WebAPI endpoints
- Refactoring portions of a legacy web service to eliminate dependencies on legacy Merril Lynch Framework
- Analysis of SQL stored procedures to determine result sets based on input search criteria
- Mapping SQL result sets to entity classes
- Source code management in Bitbucket with linkage to Jira Kanban tasks

*10/30/22 - 2/17/23*

**Wells Fargo, contractor**
- Software Development in Card Analytics and Services

**Responsibilities / Accomplishments**
- Documentation and diagramming of the Global Remittance System UI, middleware, and backend
- Development and refactoring of C# ASP.NET WebForms UI for the Global Remittance System
- Modification of process flow scripts in APE for automated processing of remittances
- Source code management in TFS

*1/4/21 - 12/31/21*

**Bank of America, contractor**
- Application Architect V in Advanced Cloud Computing: Foundational and Future Technologies group

**Responsibilities / Accomplishments**
- Maintenance and enhancement of React UI front-end web apps for AI/ML backends
- Migration and reorganization of React app to TypeScript with refactoring
- Creation of Proof-of-Concept web apps in Angular 10 with custom Bootstrap theme for styling
- Creation of React Proof-of-Concept web apps in React with Redux and Bootstrap for styling
- Creation of dendrogram in JavaScript based on the D3 library using code from Mike Bostock and others
- Creation of NPM packages for Angular and React app templates for rapid POC
- Consumption of AI/ML backends with Python REST interfaces
- Creation of mock backend REST API in C# using WebAPI2 and Visual Studio 2019 with .NET 4.5

*6/11/19 - 2/18/20*

**Bank of America, contractor**
- Software Development in Agile environment

**Responsibilities / Accomplishments**
- Maintenance and enhancement of an Angular 7/8 UI app with a WebAPI REST backend
- Angular Material Design used for UI metaphor.
- .NET Core 2.1 and 2.2, and moving to 3.1
- Entity Framework 2.1 and 2.2
- Consuming SOAP web services using HttpWebRequest
- Processing JSON from WebAPI REST services
- Development of WebAPI service for integration with enterprise logging

*11/18 - 6/19*

**Wells Fargo, contractor**
- Software and Database Development in Agile environment

**Responsibilities / Accomplishments**
- UI development using ASP.NET MVC, jQuery, Bootstrap 3.3.7, Bootstrap 4.1 components
- Creation, testing, and debugging of WebAPI 2 REST services and services for communication with RESTful API''ss
- Creation of SQL Server objects including tables, keys, indices, views, and stored procedures
- Reverse engineered large database with no foreign keys and created ER diagrams

| 5/17 - 11/18 | **Bank of America, contractor** |
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- Software and Database Development in Agile environment

**Responsibilities / Accomplishments**

- Development of Power of Attorney application using Angular 4 and WebAPI in a team effort
- UI development using Angular 4, Bootstrap 3.3.7, Angular Kendo UI, and PrimeNG components
- Creation of custom Bootstrap theme to align with base Bank of America theme.
- Creation, testing, and debugging of WebAPI 2 REST services
- Creation of TypeScript classes and Angular services for communication using RxJS with REST API
- Creation of SQL Server objects including tables, keys, indices, views, and stored procedures
- Creation of unit tests for TDD of UI and backend
- Participation in daily Agile SCRUM calls and following sprint protocols
- Participation in Agile sprint backlog grooming, sprint planning, and reporting progress, using Jira.

| 3/17 - 4/17 | **EPRI, contractor** |
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- Software Development

**Responsibilities / Accomplishments**

- Analysis and maintenance of an MVC application with Angular 1.2 forms
- JavaScript development
- Reverse engineered database and created ER diagrams

| 8/15-3/17 | **Scott Safety, contractor** |
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- Software and Database Development

**Responsibilities / Accomplishments**

- Design and development of a system to control high pressure multi-stage compressors and fill SCBA tanks
- Designed event driven low level interface to communicate with PLC and I/O systems using TCP and ModBus
- Designed WPF user interface using MVVM Light with use of Telerik controls including dials and gauges
- Designed SQL 2008/2014 database using Entity Framework Code First and managed migrations and seeding
- Designed and implemented all database domain entities and relationships, including navigable properties
- Designed and implemented the majority of Views and View Models
- Custom XAML styles

| 11/13 - 5/15 | **Wells Fargo, contractor** |
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- Software and Database Development

**Responsibilities / Accomplishments**

- Maintenance and development of an ASP.NET 4.0 WebForms application
- Development of an ASMX web service with multiple applications utilizing the interface
- Maintenance and development of SQL Server schemas, stored procedures and migration scripts

Use of Visual Studio 2010 and 2012 with Subversion using AnhkSVN and Tortoise SVN for continuous integration

| 7/13 - 11/13 | **Bank of America, contractor** |
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- Software and Database Development

**Responsibilities / Accomplishments**

- Development of new Single Page Application (SPA) using HTML5 and CSS3 in a team effort
- Design, creation, and maintenance of SQL Server 2008 R2 databases using Entity Framework Code First
- Creation of C# class libraries for storing and retrieving files on SharePoint 2010
- Creation of WebAPI REST services using MVC 4
- UI development using jQuery, Knockout, Breeze, Durandal, JSON JavaScript libraries
- Creation of workflows using Windows Workflow Foundation 4
- Use of Visual Studio 2012 with Subversion using AnhkSVN and Tortoise SVN for continuous integration

| 4/12 - 7/13 | **The Schaeffler Group, contractor** |
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- Software and Database Development

**Responsibilities / Accomplishments**

- Creation of new VB.NET WinForms applications using LINQ to Entities, Telerik controls, and WPF controls
- Design, creation, and maintenance of SQL Server 2008 R2 databases for the applications
- Creation of VB.NET and C# class libraries for hardware device communication interfaces
- Development of Android application used to communicate with devices using sockets and telnet protocols
- Creation of Access 2007 databases, applications, and reports for departmental record keeping
- Code development for Silicon Labs 8051/EZRadioPro wireless development system in C

| 2/12 - 4/12 | **Billy Graham Evangelistic Association, contractor** |
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- Software and Database Development

**Responsibilities / Accomplishments**

- Creation of new n-tiered ASP.NET WebForms application using WCF and LINQ to Entities
- Use of jQuery, jQuery UI, and AJAX Control Toolkit for modern user interface
- Conversion and complete rewrite of ASP and VB application
- New stored procedures and database changes to add keys and indexes while maintaining compatibility.

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| *3/11 - 11/11* | **Electrolux, contractor** |
| | • Software and Database Maintenance and Development |
| | **Responsibilities / Accomplishments** |
| | • Maintenance and enhancement of a C# ASP.NET/WCF application for internal use by Sales Management team |
| | • Analysis, debugging, and modifications to large stored procedures used in SSIS packages in SQL Server 2008 |
| | • Modification, debugging, and deployment of SSIS packages. |
| | • Development of a new C# ASP.NET 3.5 application and WCF services |

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| *1/10 - 3/11* | **Bank of America, contractor** |
| | • Software, Database, and Reports Development |
| | **Responsibilities / Accomplishments** |
| | • Development and enhancement of a C# ASP.NET application for internal use by Enterprise Privacy |
| | • AJAX, AJAX Control Toolkit, Infragistics NetAdvantage 2010 ASP.NET controls |
| | • LINQ to Datasets. |
| | • JavaScript, client side, and server-side validation |
| | • Developing SQL Server views, stored procedures, and functions |
| | • Preparing SQL scripts for schema changes for development and production |
| | • Modifying, creating, and deploying SQL Server Reporting Services reports (SSRS) |
| | • Developed a .NET interface to abstract Java based web services |
| | • Source control using Team Foundation Server with Visual Studio 2010 Ultimate |

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| *8/09 - 12/09* | **Employment Security Commission of North Carolina, contractor** |
| | • Software Development |
| | **Responsibilities / Accomplishments** |
| | • Development of data transformation and loading application in WinForms using VB.NET |
| | • SQL Server stored procedures and complex queries |
| | • Automated data validation |

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| *4/08 - 12/08* | **Wachovia, contractor** |
| | • Software Maintenance and Development |
| | **Responsibilities / Accomplishments** |
| | • Maintained and developed Legal Order Processing Summons and Subpoenas ASP.NET 1.1 application in C#. This is a large multi-tiered application using .NET remoting and a number of third party components. |
| | • Development and maintenance of SQL Server 2005 databases. |
| | • Development and maintenance of business rules for YASU QuickRules workflow engine. |
| | • Extensive use of XML in data driven user interfaces and workflow process. Involved storing XML in databases as well as using for process communications. |
| | • Developed test cases for NUnit 2.4.7 |
| | • Crystal Reports changes |
| | • SQL Server Reporting Services report modifications |

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| *11/07 - 3/08* | **Velocitor Solutions** |
| | • Software Development |
| | **Responsibilities / Accomplishments** |
| | • Development of Windows Mobile 5 and Pocket PC applications using C++ and MFC. |
| | • Designed and generated databases for SQL Server 2005 using Visio for Enterprise Architects. |

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| *11/05 - 8/07* | **Wachovia, contractor** |
| | • Software Design and Maintenance |
| | **Responsibilities / Accomplishments** |
| | • Designed, developed, and maintained Windows Services in C#. |
| | • Maintained and added new web methods to a mission critical SOAP Web Service. |
| | • Developed ASP.NET web application for data maintenance and correction. |
| | • Development and maintenance of SQL Server databases. |
| | • Optimization of SQL stored procedures and queries. |
| | • Integration of Oracle 9 database sources. |
| | • Extensive use of XML, XSD, and XSLT in web service communications and operations. |
| | • Development and maintenance of UNIX scripts for execution of SQL Server DTS data manipulation packages. |
| | • Coordinated deployment of .NET applications, Windows services, web services, and databases. |

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| *5/05 - 10/05* | **Bank of America, contractor** |
| | • Software Design and Engineering |
| | **Responsibilities / Accomplishments** |
| | • Developed OfficeExportWebControl  ASP.NET web control and OfficeExport web service to export Excel, Word, PowerPoint, and PDF documents from images and ADO.NET data sources. |
| | • Used the OfficeExportWebControl to provide exports of executive reports. |
| | • Developed interface to create incidents in Magic Service Desk application. |
| | • Developing SQL Server 2000 DTS Custom Task components for enhanced FTP and email, Magic incidents, and error logging. |
| | • Developed library of common components and infrastructure enhancements. |
| | • Documentation of new and existing components. |
| | • Maintenance and enhancement of ASP.NET and ASP applications. |

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| *10/01 - 5/05* | **Self Employed** |
| | • Mechanical Design / Software Design and Engineering |
| | **Responsibilities / Accomplishments** |
| | • Design and implementation of online community software for PC web browsers using C# and ASP.NET. |
| | • OOD for online community software using UML Use Case and Activity diagrams. |
| | • Developed n-tier components for online community software using .NET and ADO.NET. |
| | • Intense design and development using ASP.NET Mobile Web Forms for phone and PDA browsers. |
| | • Windows Forms application development and User Control development using C# and VB.NET. |
| | • Web Forms application development using C#, VB.NET, and J#. |
| | • Database development using Microsoft SQL Server 2000 and Microsoft Access. |
| | • Development and consumption of XML Web Services using C# and VB.NET. |
| | • VB6 COM component and VB6 hosting of .NET components registered for COM interop. |
| | • XML, XSLT, and XPath development. |

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| *9/00 - 9/01* | **YOUcentric, Inc.** |
| | **Positions Held** |
| | • Software Architect and Developer |
| | **Responsibilities / Accomplishments** |
| | • Interfaced with Exchange 2000 Server using Web Storage System Events and CDO. |
| | • Developed VB COM components for Collaboration Data Object interfacing. |
| | • Exploration of VoiceXML as an IVR replacement. |
| | • Researched Computer Telephony Integration solutions. |
| | • Developed adapter to interface a GUI with the GeoTel / Cisco ICM CTI JavaClient. |
| | • Maintenance and enhancement of JFC/Swing application. |
| | • Diagramming new and existing components using UML. |
| | • Developed UML Use Case diagrams and OOD models for Computer Telephony Interface. |
| | • Developed UML Use Case, Activity, and Sequence diagrams for Exchange Server 2000 interfacing |
| | • Round trip engineering of Java components using UML tools. |

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| *7/1995 - 9/2000* | **Progressive Software, Inc.** |
| | **Positions Held** |
| | • Chief Designer, Chief Architect, Senior Software Engineer |
| | **Responsibilities / Accomplishments** |
| | • Created a lightweight windowing class library called Gadgets using MFC used in the Windows POS UI. |
| | • Designed the IRIS POS (Point-of-Sale) look and feel, and designed the order taking engine. |
| | • Developed the IRIS Shell, Item Master Editor, and Menu Editor Back Office Components. |
| | • Created a multi-page web browser prototype called RADIX to facilitate web-based workflow management. |
| | • Led the conversion of IRIS to Unicode, and readied IRIS for international markets. |
| | • Re-designed the Alerts Engine and implemented the new engine entirely as VB COM components. |
| | • Interfaced IRIS to Gazelle Customer Relationship Management system using VB and ATL COM components. |
| | • Created a prototype Web-based POS using ASP with VB and Java COM components. |
| | • Created a prototype Java/Swing based POS. This prototype uses some of the same components as the ASP based prototype. The goal was to be able to deploy the app in thick or thin environments. |
| | • Interviewed programmer and technical job candidates, including administering MFC and C++ skill tests. |
| | • Presided over weekly developer meetings. |
| | • UML and Booch diagramming of IRIS system. |
| | • Round trip engineering of MFC and Java components using UML tools including Rational Rose. |

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| *1989 - 1995* | **Playroom Software** |
| | **Positions Held** |
| | • President, Chief Programmer |
| | **Responsibilities / Accomplishments** |
| | • Designed and developed Makeover/OSFrame in C to enhance the Windows 3.0/3.1 environment. All applications were DBCS enabled, and the entire suite of applications was translated into Japanese. |
| | • Developed Windows based MVP Editor/Librarians to create, edit, and store sound programs for MIDI synthesizers and digital effects. |
| | • Performed sales and marketing functions including production of four-color magazine ads. |
| | • Designed and developed MFC/C++ based Sierra Media Rack for Turtle Beach Systems |
| | • Developed advanced voice response systems for Mellon Bank. |

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| *1986 - 1989* | **Backroom Systems Group, Inc.** |
| | **Positions Held** |
| | • Communications Specialist, Senior Software Engineer |
| | **Responsibilities / Accomplishments** |
| | • Developed coHOST to facilitate micro-to-mainframe communications. coHOST simplified the creation of robot operator micro-to-mainframe communications. Applications at Backroom Systems Group needed to access the broad range of mainframes used in banking. coHOST allowed connection to IBM, Burroughs, and NCR mini and mainframes without requiring application changes. |
| | • Installed coHOST in over 50 bank operation centers. |
| | • Provided sales assistance and performed demonstrations in US and Canada. |

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| *1984 - 1986* | **MicroTASK, Inc.**<br>**Positions Held**<br>• President, Programmer<br>**Responsibilities / Accomplishments**<br>• Developed the Auction Management System for tobacco warehouse management.  Performs all auction accounting, writes checks to sellers, and bills the buyers.  The Scheduling Management System maintains seller information and schedules deliveries to the warehouses.<br>• Developed a file manager called the Virtual/Volume/Manager for MS-DOS, CP/M, UNIX, and UCSD p-System.<br>• Developed the Faison Fruit and Vegetable Management System for Faison Fruit and Vegetable Exchange to manage sales, billing, inventory, and reporting.<br>• Developed the AutoSow IV hardware and software system used to feed laboratory animals used in research.  The AutoSow is a patented robotic system that dispenses individual amounts of formula to the animals, and performs hygiene duties. |
| *1982 - 1984* | **North Carolina State University**<br>**Positions Held**<br>• Group Manager, Programmer<br>**Responsibilities / Accomplishments**<br>• Developed VM68K, a Motorola 68000 simulator, for teaching assembly language in a required undergraduate course. It featured a screen-oriented debugger and completely simulated the 68000 instruction set.<br>• Was the manager of a group of four students who developed a terminal communications package for campus use and other projects the Computer Science Department requested.<br>• Taught videotaped course for CRESS, an Army funded program for gifted and talented high school students. |
| *Education* | **College**<br>• Attended N.C. State University 1977-1979, 1981-1983 in Computer Science and Electrical Engineering. Did not obtain degree. Left school to start MicroTASK.<br>**High School**<br>• Monroe High School 1973-1977 with emphasis on College Prep, Math, and Science |
| *Continuing Education* | **Online Training**<br>• Pluralsight 2010-2020 with completion of courses in MVC 3 and 4 (including WebAPI), Entity Framework, LINQ, AngularJS, JavaScript, jQuery, Bootstrap, Android, iOS, Cordova, Ionic.<br>• MSDN, YouTube, Stack Overflow, various blogs |

The tracking of courses, modules, and sections makes Pluralsight a **First Look** for me on training on software technologies that are emerging. Courses marked as Beginner are usually the best place to start when one needs to learn a technology. They are not for programming beginners and the Course Introductions usually have other prerequisites. The courses are fast paced and require a lot of focus and following along in code and activities to get the most of them. I have done a lot of training on topics like Angular 2+, Material Design, Android, and Swift development that are not currently recorded as complete. Some courses (Android and others) completed before 2015 have been retired and do not show in my history.

My public Pluralsight Profile for courses currently recorded as Complete:

https://app.pluralsight.com/profile/donstegall

Basics of Programming with JavaScript
jQuery: Getting Started
JavaScript Objects and Prototypes
Advanced Techniques in JavaScript and jQuery
CLR Threading
WCF Fundamentals
Excel 2010: Getting Started
Excel 2010: Functions, Formulas, and Filters
Excel 2010: Charts and PivotTables
SharePoint 2010 Basics
Introduction to WF 4 (Windows Workflow Foundation 4)
Introduction to iOS - Part 1
Introduction to iOS - Part 2
Introduction to iOS for .NET Developers
Microsoft Azure for Enterprises: What and Why
Windows Phone 7 Basics
Introduction to Building Windows 8 Applications
C# Fundamentals with Visual Studio 2015
Entity Framework Code First Migrations
IronRuby by Example (Ruby on Microsoft .NET DLR)
Introduction to Bootstrap
AngularJS: Get Started
AngularJS Fundamentals
AngularJS Routing In-depth
How Git Works
Play by Play: Deploying an Angular 2 App to Azure with Git with John Papa and Shayne Boyer
React: Getting Started
Entity Framework Core 2: Getting Started
A Better CSS: LESS and SASS
Python: The Big Picture
Java EE: The Big Picture
Play by Play: iOS and Swift from Scratch
Android Apps with Kotlin: Tools and Testing
Preparing Your Move to Entity Framework Core 5: What's New and What's Improved

*Technical*
*Experience*

*(Don Stegall)*

**Operating Systems (years used)**
- Windows – Most versions since release – (1986-2024)
- Mac OS X – (2013-2024)
- Android – (2011-2024)
- iOS/iPhone/iPad (2013-2024)
- Linux – Ubuntu, Fedora, SuSE, Red Hat, Corel, TurboLinux – (99-00, 05-07, 09-19, 2021-2024)
- Windows CE – 1.0, 1.1, 2.0, 2.1, CE/PC Development Platform – (1997-1999, 2004-2009)
- UNIX – System 3, 4.2 BSD, Xenix – (1982-1987, 2012-2024)
- VM/370 – (1981-1984), MVS/TSO – (1982-1984), Data General AOS – (1983-1984)
- UCSD P-System – 68000, PDP-11, 8086 – (1981-1984)

**High Level Programming Languages (years used)**
- C# – (2001-2024)
- Java – 1.0, 1.1, 1.1.6, 1.1.8, 1.2.2, 1.3 – (1997, 1999-2001, 2007-2024)
- JavaScript – (1998-2024)
- TypeScript – (2015-2024)
- Go – (2019-2020, 2024)
- Python – (2020-2021, 2024)
- VB.NET – (2002-2013)
- C++ – Visual C++ 1.x, 2.x, 4.x, 5.0, 6.0 – (1993-2005, 2019-2022)
- C – Many versions – (81-93,13,19-22)
- Visual Basic – 1.0, 3.0, 5.0, 6.0 – (91, 95, 97-03)
- BASIC – (81-90)
- Pascal – Turbo, Waterloo, IBM VS, UCSD – (81-89)
- PL/I – Multi-tasking drivers for DG AOS – (83-84)
- Prolog – (88-89), LISP – (81-93, 08-09), APL – (81), FORTRAN (81-95)

**Tools (years used)**
- Visual Studio 2024, 2022, 2019, 2017 2015 2013, 2012, 2010, 2008, 2005, 2003, 2002 – (02-24)
- Visual Studio Code  – (beta to 2024)
- Eclipse  – (2011-2024)
- XCode  – (2013-2024)
- Android Studio  – (2016-2024)
- Git, GitHub – (2015-2024)
- TFS - Team Foundation Server 2015, 2010, 2008 – (2010-2019, 2021-2024)
- Visio Professional, Enterprise Architect – (03-24)
- Visual SourceSafe – 4.0, 5.0 – (1995-2009)
- Visio 2016, 2010, 2003, 2000 – (2000-2020)
- Rational ClearCase – (1999-2000, 2010-2011)
- Rational Rose –  (2000)
- ER/Win – (1997-1998)

**Technologies (years used)**
- HTML, HTML5, CSS, CSS3, LESS, SASS, SCSS – (94-24)
- JavaScript, jQuery, TypeScript, JSON – (98-24)
- Angular (14-24)
- React (16-24)
- React Native (18-22)
- Ionic Framework (18-22)
- NativeScript
- ASP.NET – (01-20), MVC 2, MVC 3, MVC 4 – (11-22)
- WPF (3012-2024)
- Silverlight
- Windows Phone
- Windows UWP, Windows Store, XAML (12-24)
- WinForms – (01-24)
- WebForms – (03-20,22,24)
- LINQ – (10-24), Entity Framework – (11-24), Entity Framework Core – (18-24)
- Azure – (13-24)
- AWS – (18-22)
- DTS, SSIS, SSRS – (05-13)
- WCF – (10-15,19-20,23-24)
- ASP – (99-05)
- XML – (99-24)
- XSLT – (01-21)
- WML (WAP), VoiceXML – (01-05)
- IIS – 3.0, 4.0, 5.0, 5.5, 6.0, 7.5 – (98-20)
- ISAPI – (98-08)
- UML – (99-20), Booch – (96-00)
- EJB – J2EE Reference Implementation, WebLogic 5.1,6.0 – (00-01)
- JFC/Swing – (00-01)
- Java Servlets – (00-01)
- JSP – (00-01)
- Apache Web Server – (00, 09-10)
- Windows API – Very deep on all versions – (86-00)
- MFC – Very experienced with all versions – (93-00, 07-08)
- ATL – (98-00)
- COM / DCOM – Using C, C++, MFC, VB, Java – (96-00,05)
- ADO / OleDB – Using VB, MFC – (98-02)
- DAO – Using VB, MFC, DAOSDK – (95-00)
- MTS – Using VB – (99)
- MSMQ – Using VB, MFC, ATL – (99-00,06-08)
- Queued Components (DCOM, COM+) – (98-00)
- IBM MQ Series – (05-07)

**Databases (years used)**
- SQL Server – 2012-2024, 2008, 2005, 2000, 6.5, 7.0, CE – (96-24)
- Oracle – 11, 10g, 9, 8.0 – (98-99, 05-08, 13-15,19)
- MySQL – 5.x – (09-10, 15-22)
- Microsoft Access – All versions – (92-13)
- SQL Anywhere – 4.5, 5.0 – (96-97,01)
- Turbo Toolbox – (83-89)

**Assembly Languages**
- 8080, 8085, 8086, 80286, 80386, 80486
- 6800, 6802, 6805, 6809
- 68000, 68010, 68020
- IBM 370
- PDP-11