

DON STEGALL

Software Architect • Engineering Leader • 45 Years of Experience

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PROFESSIONAL PROFILE

Software architect and engineering leader with 45 years of experience designing systems that solve hard problems and last. Created the IRIS point-of-sale system that powered Starbucks worldwide for 15+ years and was still running at Jack in the Box as late as 2022. Nearly two decades of successful contract engagements at Bank of America, Wells Fargo, and other enterprises delivering mission-critical financial services, industrial IoT, and enterprise infrastructure systems. Proven mentor who builds developers into strong engineers. Currently developing a cross-platform healthcare communication system for Android/WearOS and iOS/Apple Watch.

KEY ACCOMPLISHMENTS

- **IRIS / GuestCheck POS:** Designed and architected the point-of-sale system that powered Starbucks globally for 15+ years, processing millions of transactions daily across thousands of locations. Led international deployment including Japan market entry. System outlived my tenure by over two decades.
- **Bank of America — Power of Attorney App (2017):** Rescued a stalled application for the Corporate Secretary by mentoring a backend-only developer in Angular 2+ and TypeScript. Introduced OO design patterns adopted as team standards. Delivered the application to production.
- **Bank of America — Privacy Event Management (2010):** Inherited a failing database project, stabilized it, built and led the team, and delivered a production system relied upon across the enterprise.
- **Wells Fargo — Wire Transfer Service (2013–2015):** Created a penny-perfect wire transfer service for Commercial Mortgage Banking Services handling immense monthly volumes. Scalability architecture led to deployment across 10+ production servers.
- **Bank of America — Document Generation Architecture (2005):** Designed an Aspose.NET server farm with web service backend and drag-and-drop frontend control, generating PDF, Excel, Word, and PowerPoint documents at enterprise scale.
- **The Schaeffler Group — Wind Turbine Monitoring (2012–2013):** Designed embedded controller software and mesh networking infrastructure for wind turbine vibration monitoring, replacing unreliable 3G connectivity with reliable edge data collection.
- **Scott Safety — SCBA Tank Filling System (2015–2017):** Designed a system to control high-pressure multi-stage compressors for filling firefighter breathing apparatus tanks. Built event-driven PLC/ModBus interface, WPF/MVVM UI with Telerik dials and gauges, and Entity Framework Code First database.
- **Healthcare Communication System (Current):** Designing and building a cross-platform patient care communication system: Kotlin/Jetpack Compose for Android and WearOS, SwiftUI for iOS and watchOS, with Wearable Data Layer API for real-time bidirectional device synchronization.

PROFESSIONAL EXPERIENCE

Independent Development

2012 – Present

Software Architect, Multi-Platform Developer

- Developing a cross-platform healthcare communication app: Android/WearOS (Kotlin, Jetpack Compose) + iOS/watchOS (SwiftUI) with Wearable Data Layer API for real-time phone-watch synchronization
- Building and deploying web applications with Blazor, Blazor Hybrid with MAUI, and ASP.NET Core, with shared UI across web and native platforms
- Developing and publishing Android apps to Google Play Store (Java, Kotlin) since 2012; iOS/macOS apps in Swift and Objective-C
- Published Windows UWP app (Drill Bit Charts Pro) to Windows Store
- Developing and deploying RESTful APIs and microservices in C#, Python, Go on Azure, AWS, GCP
- Extensive development with Angular, React, TypeScript, and modern JavaScript frameworks

- Founded RCPRO (R/C Pylon Racing Organization, 2003); published feature articles in Model Aviation magazine; designed the internationally-adopted Portable Pylon system
- 3D printing design and production for R/C aircraft kits using Bambu Lab and FlashForge equipment

Bank of America (Contract)

July 2023 – Feb 2024

Software Developer — Global Wealth Investment Management

- Documented and diagrammed legacy C# web service with WCF and WebAPI endpoints
- Refactored legacy web service to eliminate dependencies on Merrill Lynch framework
- Analyzed complex SQL stored procedures and mapped result sets to entity classes
- Source control via Bitbucket with Jira Kanban task management

Wells Fargo (Contract)

Oct 2022 – Feb 2023

Software Developer — Card Analytics and Services

- Documented and diagrammed the Global Remittance System UI, middleware, and backend architecture
- Developed and refactored C# ASP.NET WebForms UI for the Global Remittance System
- Modified automated processing scripts in APE for remittance workflows

Bank of America (Contract)

Jan 2021 – Dec 2021

Application Architect V — Advanced Cloud Computing: Foundational and Future Technologies

- Maintained and enhanced React UI front-end applications for AI/ML backends
- Migrated and reorganized React app to TypeScript with comprehensive refactoring
- Created proof-of-concept apps in Angular 10 and React with Redux, consuming Python REST AI/ML services
- Built NPM packages for Angular and React app templates enabling rapid POC development
- Created D3-based dendrogram visualizations for data exploration

Bank of America (Contract)

June 2019 – Feb 2020

Software Developer — Agile Environment

- Maintained and enhanced Angular 7/8 application with WebAPI REST backend
- Angular Material Design UI with .NET Core 2.1/2.2, migrating to 3.1
- Entity Framework integration; SOAP and REST service consumption

Wells Fargo (Contract)

Nov 2018 – June 2019

Software and Database Developer

- ASP.NET MVC UI development with jQuery, Bootstrap 3/4 components
- Created and tested WebAPI 2 REST services
- Reverse-engineered large database with no foreign keys; created ER diagrams

Bank of America (Contract)

May 2017 – Nov 2018

Software and Database Developer — Legal Documents Group

- Led development of Power of Attorney application for Corporate Secretary using Angular 4, WebAPI, and SQL Server
- Mentored backend developer in Angular 2+; introduced TypeScript OO design patterns adopted as team standards
- Built custom Bootstrap theme aligned with Bank of America corporate standards
- Created TypeScript classes and Angular services with RxJS for REST API communication
- Full Agile/SCRUM participation including sprint planning, backlog grooming, and Jira management

EPRI (Contract)

Mar 2017 – Apr 2017

Software Developer

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

Scott Safety (Contract)

Aug 2015 – Mar 2017

Software and Database Developer

- Designed and developed system to control high-pressure multi-stage compressors for filling firefighter SCBA tanks
- Designed event-driven PLC/ModBus interface using TCP for hardware communication
- Designed WPF UI using MVVM Light with Telerik controls including dials and gauges
- Designed SQL Server database using Entity Framework Code First with managed migrations

Wells Fargo (Contract)

Nov 2013 – May 2015

Software and Database Developer — Commercial Mortgage Banking Services

- Created wire transfer service for CMBS handling massive monthly volumes of incoming/outgoing wires with penny-perfect accuracy; scaled across 10+ production servers
- Worked across CMBS, Wells Fargo Multifamily Capital, and Real Estate Lock Box Management
- Maintained and developed ASP.NET 4.0 WebForms applications and ASMX web services
- SQL Server schema maintenance, stored procedures, and migration scripts

Bank of America (Contract)

July 2013 – Nov 2013

Software and Database Developer

- Created SharePoint 2010 document management web service abstracting complex SharePoint APIs into a simple interface usable across multiple programming languages
- Developed HTML5/CSS3 Single Page Application with jQuery, Knockout, Breeze, Durandal
- Created WebAPI REST services using MVC 4 with Entity Framework Code First
- Set up personal SharePoint and Active Directory servers at home to work at full speed

The Schaeffler Group (Contract)

Apr 2012 – July 2013

Software and Database Developer

- Designed embedded controller software for wind turbine vibration monitoring; replaced unreliable 3G with mesh networking using Silicon Labs 8051/EZRadioPro wireless modules
- Created VB.NET/C# WinForms applications with LINQ to Entities and Telerik/WPF controls
- Developed Android application for device communication via sockets and telnet
- Created hardware device communication interface libraries

Billy Graham Evangelistic Association (Contract)

Feb 2012 – Apr 2012

Software and Database Developer

- Created n-tiered ASP.NET WebForms application using WCF and LINQ to Entities
- Complete rewrite and conversion of legacy ASP/VB application with modernized UI

Electrolux (Contract)

Mar 2011 – Nov 2011

Software and Database Developer

- Maintained and enhanced C# ASP.NET/WCF application for Sales Management
- Analyzed, debugged, and modified large stored procedures in SSIS packages

Bank of America (Contract)

Jan 2010 – Mar 2011

Software, Database, and Reports Developer — Enterprise Privacy

- Rescued the Privacy Event Management database project from disarray; built and led team to successful delivery of production system
- Developed C# ASP.NET application with AJAX, Infragistics controls, LINQ
- Created and deployed SQL Server Reporting Services (SSRS) reports
- Developed .NET interface to abstract Java-based web services

Employment Security Commission of NC (Contract)

Aug 2009 – Dec 2009

Software Developer

- Developed data transformation and loading application in VB.NET WinForms

Wachovia (Contract)

Apr 2008 – Dec 2008

Software Developer

- Maintained Legal Order Processing (Summons and Subpoenas) multi-tiered ASP.NET application
- Extensive XML-driven UI and workflow process development

Velocitor Solutions

Nov 2007 – Mar 2008

Software Developer

- Developed Windows Mobile 5 and Pocket PC applications using C++ and MFC

Wachovia (Contract)

Nov 2005 – Aug 2007

Software Designer and Developer

- Designed and maintained Windows Services, mission-critical SOAP web services, and ASP.NET applications in C#
- SQL Server and Oracle 9 database integration; UNIX script development for DTS packages

Bank of America (Contract)

May 2005 – Oct 2005

Software Designer and Engineer

- Architected document generation system: Aspose.NET server farm with web service backend and drag-and-drop ASP.NET control, producing PDF, Excel, Word, and PowerPoint at enterprise scale
- Developed common component library and infrastructure enhancements

Self-Employed

Oct 2001 – May 2005

Software Designer and Engineer

- Designed and built online community software using C#, ASP.NET, and ASP.NET Mobile Web Forms
- OOD with UML Use Case and Activity diagrams; n-tier architecture with .NET and ADO.NET
- XML Web Services development and consumption

YOUcentric, Inc.

Sep 2000 – Sep 2001

Software Architect and Developer

- Developed Exchange 2000 Server integration using Web Storage System Events and CDO
- Built adapter interfacing GUI with GeoTel/Cisco ICM CTI JavaClient
- Explored VoiceXML as IVR replacement; researched CTI solutions
- Maintained and enhanced JFC/Swing application; UML modeling with round-trip engineering

Progressive Software, Inc.

July 1995 – Sep 2000

Chief Software Architect — Creator of IRIS / GuestCheck POS

- Created the IRIS POS system that powered Starbucks operations worldwide for 15+ years, processing millions of daily transactions across thousands of locations. Led international deployment including Japan.
- Designed the Gadgets lightweight windowing library (MFC/C++) with touch innovations predating iPhone by 12 years
- Designed IRIS UI, order-taking engine, Item Master/Order Master paradigm, Shell, and Back Office components
- Led IRIS Unicode conversion for international markets
- Created prototypes: web-based POS (ASP/VB/Java COM), Java/Swing POS for thick/thin deployment
- Presided over weekly developer meetings; interviewed and tested programming candidates

Playroom Software

1989 – 1995

President, Chief Programmer

- Designed and developed Makeover/OSFrame for Windows 3.0/3.1 — DBCS-enabled, translated to Japanese
- Developed MIDI editor/librarians for synthesizers and digital effects
- Designed and developed Sierra Media Rack for Turtle Beach Systems using MFC/C++
- Developed advanced voice response systems for Mellon Bank

Backroom Systems Group, Inc.

1986 – 1989

Communications Specialist, Senior Software Engineer

- Developed coHOST for micro-to-mainframe communications across IBM, Burroughs, and NCR systems
- Installed coHOST in 50+ bank operation centers; provided sales assistance in US and Canada

MicroTASK, Inc.

1984 – 1986

President, Chief Programmer

- Developed Auction Management System for tobacco warehouse management
- Developed AutoSow IV: patented robotic system for feeding laboratory animals in research
- Created Virtual/Volume/Manager file manager for MS-DOS, CP/M, UNIX, and UCSD p-System

North Carolina State University

1982 – 1984

Group Manager, Programmer

- Developed VM68K, a Motorola 68000 simulator with screen-oriented debugger for teaching assembly language
- Managed group of four students on departmental software projects
- Taught videotaped course for CRESS (Army-funded gifted and talented program)

EDUCATION

North Carolina State University

1977–1979, 1981–1983

Computer Science and Electrical Engineering

Left to start MicroTASK, Inc. Career accomplishments demonstrate continuous self-directed learning across four decades of evolving technology.

Monroe High School

1973–1977

College Prep, Math, and Science

TECHNICAL SKILLS

Languages: C#, Kotlin, Swift, TypeScript, JavaScript, Java, Python, Go, C/C++, VB.NET, SQL, HTML/CSS

Frameworks & Platforms: Jetpack Compose, SwiftUI, WearOS, Angular, React, Blazor, ASP.NET Core/MVC, WPF/XAML, MAUI, Entity Framework Core, .NET 8, Ionic, React Native

Cloud & DevOps: Azure, AWS, GCP, GitHub Actions, CI/CD, Git, TFS, Docker

Databases: SQL Server (all versions since 6.5), Oracle, MySQL, SQLite, Entity Framework Code First, LINQ, SSRS/SSIS

Tools: Visual Studio 2024, VS Code, Android Studio, Xcode, Rider, Git/GitHub, Jira, Visio

Hardware & IoT: Embedded C (8051, EZRadioPro), mesh networking, PLC/ModBus, TCP device interfaces, 3D printing (Bambu Lab, FlashForge)

Architecture: Microservices, REST/SOAP web services, n-tier, MVVM, MVC, event-driven, store-and-forward, real-time bidirectional device sync

Assembly Languages: 8080/8085/8086/80x86, 6800/6805/6809, 68000/68010/68020, IBM 370, PDP-11

CONTINUING EDUCATION & ONLINE PRESENCE

Pluralsight: Extensive coursework (2010–2020) in MVC, Entity Framework, Angular, React, Android, iOS, Bootstrap, and more. Profile: <https://app.pluralsight.com/profile/donstegall>

GitHub: <https://github.com/donstegall>

Personal Site: <https://donstegall.com>