

## APPLICATIONS --- SYSTEMS --- DATA

*Senior Solutions Architect, Project Architect, Team Lead, Data Systems Manager, Adjunct Professor*

Applications Development, Database Engineering, Solutions Integration, Team Lead  
C#, VB, VBA, SQL, DBF, Clipper, FoxPro, Python, Agile, Machine Learning

Accomplished **Solutions** and **Data Engineer** demonstrating proactive application and integration of digital technologies. **Senior Dot NET Developer** adept at user engagement and robust feature rich solutions. **Solution Evangelist** with recognized command of processes, systems, and analytics. Recognized industry thought leader in Applications, Solutions, and Development.

I am seeking to extend my experiences as a leader and visionary in Engineering, Software, Data, Artificial Intelligence, and Operations. I will provide expertise in real-time operations, engineering, integration, solutions, and digital transformation on day one.

- ☆ Real-Time Engineer
- ☆ Remote Operations
- ☆ Software Architect
- ☆ Electrical Engineer
- ☆ Transformation Architect
- ☆ Data Analytics Integrator
- ☆ Database Architect
- ☆ Solutions Architect and Engineer
- ☆ Agile Kanban and Agile Contract Management
- ☆ Avionics Systems Engineer

## PRIMARY TECHNICAL SKILLS

|                 |          |                        |                          |
|-----------------|----------|------------------------|--------------------------|
| C#              | WinForms | Visual Studio          | Azure ML / ML Studio     |
| SQL / SSMS      | WPF      | Jet Brains / ReSharper | Microsoft ML:.NET        |
| .NET (all)      | MVC      | Red Gate               | Azure Cognitive Services |
| VB, VB.NET, VBA | Blazor   | Dapper / EF            | Git / GitHub             |
| Python          | WebAPI   | Pascal                 | SDLC                     |
|                 | gRPC     | Clipper                | PPDM                     |
|                 |          | FoxPro                 | Wellview / Masterview    |

## REMOTE DEVELOPMENT PROJECT SUCCESSES

- ☆ Mail processing and automation application delivering products across the US.
- ☆ Web E-Commerce and teaching application providing medical certification training.
- ☆ Public resource forecasting integrating census, demographics, and enrollment analysis.
- ☆ Automated food processing and sortation systems and applications.
- ☆ Nondestructive testing system improving throughput > 25% while improving detection 75-90%.
- ☆ Material management applications virtually eliminating errors while reducing support > 90%.
- ☆ Material handling computer and software reducing field labor requirements by 33%.
- ☆ Oilfield pipe inventory management system improving accuracy up to 100%

## EDUCATION

|                                    |   |
|------------------------------------|---|
| <b>Master Engineering</b>          | 2005 Texas Tech University                                      |
| <b>BS Electrical Engineering</b>   | 1980 Texas Tech University                                      |
| <b>Certified Secondary Teacher</b> | Secondary Math, Computer Science, Business and Finance, Physics |

## PROFESSIONAL EXPERIENCE

**Lone Star College, Houston, Texas**  
**Online Computer Science Professor**

**January 2003 to May 2021**

### **Courses Taught –Classroom**

- ✓ COSC 1401, 1401(H)  
*Introduction to Computers*
- ✓ ITSW 1404  
*Introduction to Spreadsheets*
- ✓ ITSW 1407  
*Introduction to Databases*

### **Courses Taught –Online**

- ✓ COSC 1336 / 1436     *Programming I*
- ✓ COSC 1337 / 1437     *Programming II*
- ✓ IMED 1316             *Web Design*
- ✓ ITSE 1491             *Intro to C#*
- ✓ ITSE 1492             *Special Topics*
- ✓ ITSE 2472             *Web Applications*

### **Additional Activities and Responsibilities:**

- ✓ *Adjunct Professor of the Year for 2009*
- ✓ *Created **course material** and lab manuals*
- ✓ *College representative to **High School** outreach*
- ✓ *Member Curriculum Committee*
- ✓ *Participant in public promotional activities*
- ✓ *Technical and Developer Industry Conference Speaker*
- ✓ *Commercial Textbook Developer*
- ✓ *Speaker at Lone Star Technology Conferences*

**Southwestern Energy, Houston, Texas**  
**Senior Solutions Architect, Data Architect, Project Architect**

**February 2010 to July 2018**

Provided the vision and innovation identifying and implementing real-time knowledge and information projects; serving as the commonality between operations and information solutions; and guiding projects into integrated knowledge engineering. Responsible for identifying and implementing real-time knowledge and information projects. Responsible to pull together individual systems, repositories, and operation centers to add value, efficiency, and safety to the exploration and production environments.

### **Key Projects:**

- ✓ *Production surveillance and optimization (ProWELL+)*
- ✓ *Geosteering integration and analysis (Upstream Integrated Toolbox)*
- ✓ *24/7 drilling operations (Rig Data Integration – RDI2)*
- ✓ *Real-time drilling aggregation and analytics (Rig Data Intelligence – RDI3)*
- ✓ *Drilling and completions asset allocation and scheduling (Dev Schedule)*
- ✓ *Upstream operations surveillance workbook (Surveillance Assistant)*
- ✓ *Site Maintenance Response and Reporting (Site Inspection Regulatory System – SIRS)*
- ✓ *Royalty Interest Information Sharing*
- ✓ *Data Information Sharing Hub (DISH)*

**Skills Utilized:**     *Systems, Real-Time, Analytics, .NET, C#, VB, VBA, SQL, PPDM, WITSML, Wellview, Boresight, Spotfire, MDM, CQRS, TDD, SDLC*

**Intent Driven Designs, Houston, Texas**  
**Principal Architect, Director, CTO**

**May 1998 to January 2010**

Engineering and development director for real-time data acquisition, engineering, systems solutions, application architecture and development. Managed, implemented, and supported customer-directed operations solutions – real-time, operations-centric products and processes.

**Key Projects:**

- ✓ *Non-destruction Pipe Inspection System (DigiPro™)*
- ✓ *Oilfield pipe management, processing, and reporting (Tubular Data Systems – TDS™)*
- ✓ *Handheld inspection data aggregation and reporting (Portable Data Logger – PDL)*
- ✓ *Census analysis and enrollment projections*
- ✓ *Statement processing and mail processing system (GoPrint™)*
- ✓ *Automated dry-food processing and sortation system*
- ✓ *Service Fee Report Manager*

**Skills Utilized:** *Systems Architect, Data Architect, Project Architect, Real-Time, Electronic Engineering, Analytics, .NET, C#, SQL, VB6, Access VBA, Excel VBA, Clipper, LabView, Component One*

**Scan Systems Corporation, Houston, Texas**  
**Data System Manager**

**July 1990 to May 1998**

Full charge manager for application development and delivery. Design, develop, and deliver oilfield applications including real-time data acquisition, mobility, and OCTG management systems. Duties included hiring authority and performance reviews.

**Key Projects:**

- ✓ *Tubular Data Systems™ (TDS) Oil Country Tubular Goods (OCTG) pipe yard management software*
- ✓ *DigiPro™ non-destruction OCTG inspection system*
- ✓ *TallyRite™ Custom portable OCTG data accumulation device*
- ✓ *Laser-based pipe-thread inspection application*

**Skills Utilized:** *Systems and Data, Real-Time, Electronic Engineering, VB, VBA, Clipper, FoxPro, C, C++, C#, .NET, 8051, Access VBA, Excel VBA, , Component One, LabView, Psion*

## PUBLICATIONS – AUTHOR / INTERVIEWEE

*Digital Energy Journal*, Aug-Sep 2012, Getting Rid of Excel  
*Digital Energy Journal*, Jun-Jul 2012, Managing Real-Time Data  
*Digital Energy Journal*, Apr-May 2012, Service Company IT and Corporate IT  
*Code Magazine*, Jul-Aug 2021, Extension Methods  
*Oil IT Journal*, 2016, Interview with Mark Reynolds of Southwestern  
*Pittsburg Post-Gazette*, 2016, Machine Learning in O&G (telephone interview)  
*Unpublished*, 2012, “Access-ing” Your Data  
*Unpublished*, 2013, Gain Control of the Data Deluge: Architecture and Standards

## SYSTEMS AND SOLUTIONS WITH IMPACT

- ★ Production and Operations projects and processes saving approximately 25% engineering time.
- ★ Geo-steering analytics application suite reducing analysis time > 90% (days to minutes).
- ★ Real-time processing and operational analytics reducing analysis time > 90%.
- ★ Defined operational machine learning framework to increase production / revenue volume ~5%.
- ★ Master Data systems integrating silos providing analytics, assessment, reporting, solutions.
- ★ Site inspection management application raising environmental compliance > 95%.
- ★ Data Information integration and master warehouse framework for upstream planning.
- ★ Real-time drilling operations remote oversight and support integration systems and process.
- ★ Asset allocation and scheduling solution utilizing learning analytics eliminating idle time.
- ★ Nondestructive testing system improving throughput > 25% while improving detection 75-90%.
- ★ Material management applications virtually eliminating errors while reducing support > 90%.
- ★ Material handling computer and software reducing field labor requirements by 33%.
- ★ Handheld (mobile) portable data acquisition with centralized data retention and reporting.
- ★ Web E-Commerce and teaching application providing medical certification training.
- ★ Public resource forecasting integrating census, demographics and enrollment analysis.
- ★ Automated food processing and sortation systems and applications.
- ★ Near-real-time data streaming and ingestion.
- ★ Processing and extraction of data sources at scale.
- ★ Statement processing and mail processing system.
- ★ Speaker and teacher at technology gatherings.

## APPLICATIONS RECOGNIZED BY PEERS

- ★ Production surveillance and optimization (ProWELL+)
- ★ Geosteering integration and analysis (Upstream Integrated Toolbox)
- ★ 24/7 drilling operations with Real-time aggregation and analytics (Rig Data Intelligence)
- ★ Real-time drilling aggregation and analytics (Rig Data Intelligence – RDI3)
- ★ Drilling and completions asset allocation and scheduling (Dev Schedule)
- ★ Upstream operations surveillance workbook (Surveillance Assistant)
- ★ Site Maintenance Response and Reporting (Site Inspection Regulatory System – SIRS)
- ★ Data Information Sharing Hub (DISH)
- ★ Non-destruction Pipe Inspection System (DigiPro™)
- ★ Oilfield pipe management, processing and reporting (Tubular Data Systems – TDS™)
- ★ Handheld inspection data aggregation and reporting (Portable Data Logger – PDL)
- ★ Statement processing and mail processing system (GoPrint™)

## RECOMMENDATIONS BY PEERS

“richer having Mark on our team”, “great source of knowledge”, “gave me skills I needed”, “pleasure to work with”, “keen interest in latest technology”, “wide range of skills”, “immense understanding”, “key contributor”, “fortitude to [take on] onslaught of requests”, “remarkable efficiency”, “team player”, “reliable and enjoyable”, “problem solver”, “takes time to teach”, “want to get things done, hire Mark”