

Engineering and Applications Profile

Accomplished **Engineer** and **Architect** demonstrating proactive application and integration of digital technologies. Accomplished applying agile methodologies to build solutions in engineering, development, automation, adaptive processing, and distributed systems. **Solution Evangelist** with recognized command of processes, systems, analytics, machine learning, and multiple digital technologies. **Mentor, Professor and Lifelong Learner** teaching internal educational projects, university computer science, industry conferences.

Proven history of methodical digital transformation reinforcing products and cultures, attention to detail, mentoring individual personal excellence, facilitating of introspective team growth.

- ★ Senior Solutions Architect, Project Manager and Architect @ **Southwestern Energy**
- ★ Principal Architect, Director, CTO @ **Intent Driven Designs**
- ★ Data Systems Manager @ **Scan Systems Corp**

Application and Development Technical Skills

C#	.NET (all)	SQL, SSMS	Azure ML	MDM
VB6, VB.NET	WinForms	EntityFramework	ML.NET	WellView
Python	WPF	Dapper / ORM	Azure Cognitive	MasterView
Clipper	MVC	RedGate	Accord	WITSML
FoxPro	Blazor	WebAPI	Telerik	PPDM
Crystal Reports	CSS / Bootstrap	gRPC	ComponentOne	Office Interop

Soft Skills

Technical leader, organizer, manager
Change catalyst, technology evangelist
Developer team leader, coach, mentor
Solutions architect, project architect
Client facing, customer sensitive

Data management, analytics, governance
Integrated operations / remote operations
Leadership in development through board room
Proposal development – writing & support
Technical writing, artifact design

- ★ Systems Engineer: real-time systems design, production, and delivery
- ★ Systems Architect: business roadmaps, technical design, feasibility assessment, deployment planning
- ★ Professor at Lone Star College Computer Science: C#, Web Applications, Databases

Education

Master Engineering, Texas Tech University – special focus into Systems Engineering & Computer Sciences
BS Electrical Engineering, Texas Tech University – special focus into Systems and Digital Engineering

Ready To Serve

Ready to bring success and vision to technological challenges, enterprise solutions, real-time processes, analytics, IoT, automation and edge computing. Ready to implement solutions focusing on cross discipline teams, integrated user experiences, and organizational responsibility. Ready on day one.

Recent and Significant Career Highlights

- ★ 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.
- ★ Advanced military avionics solutions, architecture, and systems design.
- ★ Industry and Technical Speaker, Panelist, and Thought Leader.

Professional Experience

Intent Driven Designs, Houston, Texas

August 2018 to Present

Data Architect, Systems Engineer, Backend Developer, Azure Systems

Contract solutions for focusing on systems, engineering, data, Azure, .NET, ML, and Analytics

Top Projects (Directed, Managed and Contributed)

- Create and develop architecture for near-real-time data streaming and ingestion
- Create, deploy, and manage Azure Web Jobs, Logic Apps, and cloud-based applications
- Design and develop application framework including TDD, Microservices, and Service Bus
- Configure the processing and extraction of data sources at scale

Skills Utilized: Systems, Real-Time, Analytics, Azure ML, Microservices, .NET, C#, SQL, SOA, TDD, SDLC

Lone Star College, Houston, Texas

January 2003 to Present

Computer Science Adjunct Professor

Professor of Computer Science college credit courses – online.

Top Activities

- Adjunct of the Year 2010
- Participated in Textbook development
- Developed lab manuals for software development, web site development, web applications

Skills Taught: .NET, C#, TDD, SQL, Design Patterns, Interfaces, Defensive Programming, Jet Brains / Resharper, WinForm, Debugging, Binary Trees, Extension Methods, Common Framework, Excel, Access, VBA, PowerPoint

- ☆ Provided solutions to complex business problem areas by applying industry knowledge and objectives.
- ☆ Developed proprietary algorithms one of which increased the signal to noise ratio by 300% - 500% through computerized data acquisition, digital signal processing, presentation, and storage.

Top Projects (Directed, Managed and Contributed)

- 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

Skills Utilized: *Systems Architect, Data Architect, Project Architect, Real-Time, Analytics, OCTG, NDT, .NET, C#, SQL, VB6, VB.NET, VBA, Clipper, TDD, SDLC, Access, Excel, Electronics, National Instruments Labview, Symbol, Component One*

Scan Systems Corporation, Houston, Texas

July 1990 to May 1998

Data System Manager

Full charge manager 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.

- ☆ Designed and implemented Oil Country Tubular Goods (OCTG) pipe yard management software for small, medium, and large companies with up to the minute inventory, traffic, and invoicing information.
- ☆ Designed, engineered, developed, and implemented a portable 8051 based data accumulation device. Designed and implemented an adaptive algorithm to adjust for measurement fluctuations.
- ☆ Managed custom applications to ensure standards traceability and document certified test standards.
- ☆ Established portable data accumulation application hosted on the Symbol handheld computer devices for Oil Country Tubular Goods (OCTG) data acquisition, logging, and reporting.
- ☆ Designed, engineered, developed and packaged a laser-based pipe-thread inspection application.

Skills Utilized: *Systems and Data Architect, Planning, Real-Time, VB, Clipper, FoxPro, C, C++, 8051, Access, Electronics, OCTG, NDT, National Instruments Labview*

Recommendations

“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”