



Summary

Highly skilled software professional, with substantial experience in a wide array of technologies, industries, and business environments. More than *twenty-nine years* in professional programming, consulting, and management.

Primary strengths include architecture and design leadership for large-scale distributed software projects, building and leading development teams, and creating and improving development environments and processes. Proven track record in project delivery, from small tools to enterprise-scale products. Hands-on architect, with expert-level programming skills in a variety of languages, platforms and environments. Effective leader of development teams and organizations, and experienced at senior management level.

Experience and Achievements

Practice Manager and Principal Architect, 6/2016 - Present

ARCHITECTING INNOVATION

A.I. is a software consulting firm which prides itself on delivering innovative consulting and solutions to its many clients. With core competencies in Microsoft technologies, A.I. brought me in to create a practice around Java and other open source technologies. In this role, I perform as a Principal Consultant and Architect for key clients. I also recruit, build, and lead engagement teams, craft solutions for clients, and contribute directly to their successful delivery.

Notable achievements:

- Research and proof-of-concept work in the areas of microservices, scalable/cloud deployment (Kubernetes), Domain Driven Design, and other topics.
- Defined and led the delivery of a modern microservices architecture and technology stack based on Akka and Play Framework. Packaged in Docker and run via Docker Compose.
- Led the design and delivery of a small-footprint computing device which utilizes components built in C and Go, connecting seamlessly with the cloud hosted microservices-based system. Seamless message-level integration between Go components and Akka actors. Authored blog post on same.
- Performed deep assessments of existing world-scale enterprise software products built by the organization used to drive billions in revenue yearly, and provided a modernization roadmap. Assisted with efforts to re-align the business around the best technologies in this area.
- Created Proof-of-Concept in porting those software products to alternative database platforms, and demonstrated path to transform core to a REST based API architecture (core code is all in C).
- Set up initial DevOps efforts and processes, and evaluated migration to AWS for certain products. Led migration of legacy application development to Git, Jenkins, Artifactory.
- Assist with modernizing development tools and processes, and provide project/business consulting and leadership.
- Created and implemented development processes and methodology for a distributed development and delivery team. Assisted and mentored process owners, product owners, and developers, leading to higher quality, better planning and estimation, and successful delivery.

Hands-on technical: Java, Scala, Golang, C, Akka, Play Framework, Docker, Kubernetes, AWS, and more.

Software Architect, 4/2015 – 6/2016

VIAMI, INC. (PREVIOUSLY JDSU)

Joined a cohesive and talented development team building highly performant Big Data analytics software for telecommunication network data analysis. Contributed new code and systems to existing software stack

utilizing Groovy, Scala, Go, and C++. I also assisted a UK-based team building a similar platform using Scala and Apache Spark.

Senior Architect, 4/2013 – 1/2015

NANTHEALTH LLC (PREVIOUSLY NET.ORANGE)

I joined this healthcare company to bring my experience and expertise in creating and building enterprise-scale technology platforms, in order to take the existing system to the next level of scale and performance. While primarily focused on defining platform architecture roadmaps and technologies, I also led architecture oversight on a number of customer-focused product deliveries and ensured successful delivery. In addition, I hired and managed other architects as part of the platform team, and proxy-managed developers. My responsibilities and achievements include:

- Successful delivery of hands-on coding projects.
- Evaluation of multiple existing codebases and architectures, and creation of go-forward roadmap.
- Crafting overall platform architecture vision, including design methodologies and technologies, data architecture, and system architecture.
- Vendor and open-source evaluations.
- Creation of core platform components.
- Ran interview and hiring for multiple developer and architect positions. Had two direct reports.
- Worked with product management and client engagement in grooming requirements to actionable development stories as part of Scrum process.
- Created design specifications, communicating them to development teams, and reviewing results.
- Built proof-of-concept and spikes to evaluate/demonstrate various technical options and new technologies.
- Created training materials on new technologies and architectures for development teams, and held training workshops for the development staff.

Some keywords: Java, OSGi, Spring, JAX-RS, Docker, CoreOS, DDD, CQRS, Event Sourcing, XACML, Elasticsearch, TIBCO, JMS, Maven

Technology Consultant, Advisor and Board Member, 3/2103 - Present

VARIOUS

Worked with start-up companies to help solve technical and project management issues by providing contract programming, project management, infrastructure assistance, and technical direction as needed.

STARTUP COMPANY – PAYMENTS & BITCOIN

Board Member and CTO of a startup company working with virtual currencies. Assisting with business direction, fund-raising efforts, product definition, product management, and technical direction and oversight.

Vice President Engineering, Chief Architect, 10/2012-3/2103

BANK/PAYMENTS PROCESSING COMPANY

Hired into this startup company to design and lead development of new payments systems and platforms, as well as perform as part of the core management team. In this role I accomplished the following:

- Created a Proof of Concept design and runtime of an innovative core account management system based on an advanced rules engine.
- Mentored and led the work of other engineers in creating core components of a new payments platform.
- Created and maintained development plans and roadmaps for product development and systems architecture, managed team to those plans in an agile manner, and tracked and reported status.
- Built initial physical infrastructure within a new data center environment, including networking, a SAN disk array, and multiple hosts using a new install of RHEV (Red Hat Enterprise Virtualization) to create a private cloud environment capable of hosting a PCI compliant SaaS environment.

Some Keywords: Java, Drools, jBPM, RHEV, RHEL, ISO-8583, jPOS, Camel

Co-founder and Chief Architect, 2007-2012

GANART TECHNOLOGIES INC.

Ganart Technologies is a company dedicated to bringing new monetary solutions to the banked and un-banked population. This work involves developing all-new financial networks, terminals, and web application platforms. Some key accomplishments:

- Co-founded company, started offices simultaneously in India and locally. Spent 6 of first 9 months on-site in India. Recruited/hired initial personnel.
- Built an OLTP platform and product services, including ATM, domestic/international money transfer, and bill payments. System is highly-available and horizontally-scalable.
- Created core components of highly configurable terminal client platform, including hardware interfaces.
- Built offline processing systems which support the online platform and product services. Created initial web-based portal for system control and reporting.
- Successfully built and put into production a complete end-to-end financial ATM network, including certifying as a direct processor to the PULSE debit network.
- Ported terminal platform from custom hardware machine to CEN/XFS compliant platform, which included creating Java interfaces to the C-based XFS system.
- Created and maintained architectural vision for all systems, and oversaw all design and code.
- Set up complete software development processes and environments, including build tools, version control, wikis and bug tracking systems.
- Created distributed load/soak/performance test tools.
- Contributed to datacenter infrastructure design, development, and production support (PCI-compliant private cloud infrastructure built on RedHat virtualization technology).
- Created and maintained development systems' infrastructure.
- Created and maintained relationships with recruiting firms; led recruiting, interviewing, and hiring process.
- Shareholder and member of senior management team, contributing to company strategic direction, business development, and providing leadership to staff.

Some keywords: Java, RHEL, Linux, PCI, HSM, Security, TR-39, ATM, ISO-8583, SOA, Web services, EAI, Terracotta, Clustering, Protocol Buffers, Swing, Portal, Device Integration, Ruby, Maven, Nexus, Git, JIRA, RHEV, JMS, ActiveMQ, Camel, EIP, MySQL, Hibernate, CEN/XFS, jPOS

Principal Engineer, 2006 - 2007

SABRE HOLDINGS, INC.

Principal Performance Engineer. Testing and analysis of individual systems and end-to-end performance characteristics of Sabre's core systems. Designed and built test harnesses, ran tests, analyzed results, and built test infrastructure (including web-based Dashboard). Key technologies: Java, JSP, JMeter, LoadRunner.

Principal Engineer, 2005 - 2006

FEDEx KINKO'S OFFICE AND PRINT SERVICES, INC.

Application Integration Services. Key technologies: Java, XML, EDI, webMethods.

Independent Systems Integration Consultant, 2004 – 2005

Systems integration, web services, EAI, service-oriented architectures (SOA), and Java/J2EE systems architecture, design, and development.

BANCTEC CORPORATION

Worked on maintenance and enhancements to an imaging and archival system built in Java.

XO COMMUNICATIONS

Documentation and support of a built-in-house SOA/integration platform for this telecommunications company.

LOCKHEED MARTIN CORPORATION

Developed key enhancements to the portal server software, improving the portal's performance and stability.

ALLTEL TELECOMMUNICATIONS

Completed engagement using Vitria BusinessWare 4.1.1, integrating a legacy mainframe system using MQ Series, several database tables, and a web application.

Senior Software Architect, 2001 - 2004

A4 NETWORKS / BTRADE INC.

Senior Software Architect

Performed as the Chief Architect and developer for the Process Router: a system which can accept, transform, and route XML and non-XML data, based on dynamic business rules. Some technologies used include XML, XSLT, DOM, Servlets, Java Transaction Architecture, Java Mail, Java Activation Framework, CORBA, RMI, JDBC, JMX, EDI X12. Defined and implemented the Platform Architecture under which all products (Java based and C++ based, across many OS platforms) could work together seamlessly.

Senior Consultant, 1999 - 2001

VITRIA TECHNOLOGY, 1999 - 2001

Senior Consultant, post-sales

As a post-sale consultant, worked with several customers in implementing their enterprise application integration solutions using Vitria's flagship product: BusinessWare, a C++, Java, and CORBA based EAI system. Over a number of engagements, I successfully integrated a number of popular systems, including SAP, Oracle, MS SQL Server, mainframes, and others.

Senior Consultant, pre-sales

Supported the sales process by building Proof Of Concept solutions for potential customers, giving product demonstrations, and engaging customers' questions about the product at all levels of detail. Also contributed to core product code using Java.

Senior Software Engineer, 1999

UNIVIEW TECHNOLOGIES

Senior Software Engineer

Built and lead team to develop next-generation products. Collected requirements, acquired and evaluated pre-release hardware platforms, and successfully delivered a Product Architecture which defined the systems, services, and infrastructure required to deliver on the requirements. Delivered a development plan including timelines, resources, risks and mitigations, and all top-level use cases.

Senior Consultant, 1997-1998

SABRE TECHNOLOGY SOLUTIONS

Designed and implemented core system components of distributed systems software in both Win32 and UNIX environments using C++. Systems programming for multiple platforms, network programming, performance tuning, and large-scale distributed systems design.

Director of Software Development, 1997

ATS INC

Managed and led software development in a startup company of 6 people. I was responsible for the technical direction, project management, and development for various projects, including embedded and PC-based systems using microcontroller assembly, C, and C++.

Senior Systems Programmer Analyst, 1996-1997

CATALINA MARKETING CORPORATION

Designed an architecture that would allow operations personnel to define, modify, and monitor business processes and data flows, integrated using custom connections to various systems, linked together over CORBA to a central custom business process server. Also contributed to the development of a rewrite effort of the in-store system in C++ under OS/2.

Senior Consultant, 1995-1996

SABRE DECISION TECHNOLOGIES

Lead a team of engineers in the design and implementation for a number of high-profile projects. Key member in group responsible for the core implementation of a large system. Key areas included: system performance, communications, networking, graphics, and systems-level enhancements, C++, and cross-platform portability.

Software Engineer, 1994-1995

GGT / MICRODYNAMICS INC.

Performed on a team developing a CAD system in C++ using OS/2 Presentation Manager. Took over another project that used a DB2 database to track information on networked workstations, also using OS/2 PM.

Teacher of Object-Oriented Programming using C++

Developed and taught 14-week course on Object-Oriented programming using the C++ programming language to a group of engineers at Texas Instruments. Students learned the basics of C++ syntax while gaining insight into object-oriented analysis and design techniques.

Software Engineer, 1993-1994

GTESS CORPORATION

Designed and constructed entire MS-Windows 3.1 MDI application that used image-processing techniques to extract font samples from scanned images. The data was saved in multiple formats, and used by an Optical Character Recognition engine. Software was written in C++.

System Programmer / Software Engineer, 1988-1993

AMX CORPORATION

Performed on a team that was responsible for an MS-Windows application used to design screens for a custom Touch Panel display, using object-oriented design methodologies, CASE tools, and C++. Also completed over 100 custom system programs for distributed remote control systems. Authored two technical programming books, one tutorial and one reference, on AMX's custom development language, to which I also contributed.

Education

Completed roughly 80 semester-hours undergraduate work between 1987-1989 at **Abilene Christian University, Collin College, and Richland College.**

Skill Summary

- Java programming (core, enterprise, web, GUI)
- Programming using Golang (Go)
- Light usage of Ruby, Python, Scala, JavaScript, and Haskell
- Docker and container technologies
- Cloud technologies (AWS, Kubernetes)
- XML Technologies
- Object-Oriented Analysis and Design
- Functional Programming
- Aspect Oriented Programming
- Enterprise Application Integration
- B2Bi (Business to Business integration)
- Business Process Modeling/Automation
- RETE-based rules engine (Drools)
- Google Protocol Buffers
- Web Services (REST, SOAP, WSDL)
- Contexts and Dependency Injection (CDI)
- OSGi
- Micro-services Architectures
- Actor-based systems
- Reactive Design and Programming
- Domain Driven Design
- Event Driven Architectures
- CQRS and Event Store architectures
- DevOps, including configuration and Build Management, release management, CI/CD environments, etc.
- Agile / Extreme Programming, Scrum
- Project Management
- Team building, leadership, and management
- Offshore team creation and management
- Vendor evaluation and relationship management
- Recruiting and hiring process management
- Clustered application design and development
- High-performance computing
- Highly-available environment design
- ISO-8583 and financial network integration
- Network and Distributed Programming
- Multi-tier Architectures
- Databases and SQL (MySQL, Oracle, MSSQL, Postgres, DB2, others)
- Financial transaction processing, including PIN-based transactions, security and HSM integration
- C and C++ Programming
- Software Design Patterns
- Assembly Languages
- Middleware design and development
- System and software performance tuning
- Multithreading and Multiprocessing
- Embedded Systems
- Data Compression
- Device integration (physical device drivers, Java-native integration)
- Communication protocols, including TCP/IP and Sockets
- Network administration
- Linux system administration, including virtualization environments (RHEL/RHEV datacenter build-up)
- Windows system administration
- Network administration, including router, firewall, SAN, and switch setup and administration