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Director IT - Software Engineering
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*“Always looking forward to what I enjoy doing most...
...helping teams develop useful solutions to real problems.”*

I enjoy leading teams in solving big problems with simple solutions. My experience shows that I have taken part in providing many solutions for various needs. My passion for this drives me to provide high quality with high performance. I care about others as I strive to exceed the expectation of my superiors, peers and teams.

Leadership Qualifications

- Management of large teams totaling over 25 people
- Streamline many development processes/projects through capacity management
- Able to efficiently manage and apply the skills of both experienced and inexperienced developers on the same team to meet objectives
- Able to manage effectively regardless of personality types
- Commonly dealt with both mixed language and mixed platform development environments
- Always able to take suggestions from others
- Own my mistakes and learn from them
- Believe that high morale leads to high creativity and productivity
- Believe that leading people includes serving people (without them there's no need for me)

Technical Qualifications:

- Over twenty five years of professional programming experience
- Twenty years financial payments processing experience
- Cloud-based application development using AWS and Azure technology stacks
- LLM Research for document analysis and increased team coding velocity using generative AI
- ML development and applications of neural networks and other Machine Learning algorithms for fraud detection
- Front End Authorization and Back End Settlement for Debit and Prepaid processing
- UNIX and Windows software development using C++, Java, C#
- Regularly use modern C++ concurrency and utilize features offered in C++17/20
- High Performance On-line Transaction Processing systems design and development
- Many successful Design to Deployment large scale system deliveries
- Multi-platform system development
- Embedded development using Linux and proprietary operating systems and platforms
- Cryptographic network application security using well known algorithms, protocols, and APIs
- Use of cross platform (Windows/UNIX) open source C++ GUI libraries such as Qt and FLTK
- Database layout and application design and development with many databases (such as DB2, SQL Server, Oracle, MySQL, SQLite, MongoDB), native database APIs such as OCI and CLI
- Real-time development of embedded micro-controllers
- Business process analysis for streamlining, automation, and data handling/processing
- Follow Common Software Development Life Cycles (SDLC)

Operating Systems:

Linux • AIX • Windows • Solaris • MacOSX • HP/UX

Leadership Experience:

- Simultaneously leading three teams of development and QA engineers
- Interfacing Product Team's business needs with Architecture, Infrastructure and Engineering resources
- Communicating at an executive level and a junior engineering level
- Facilitating understanding between peers on neighboring teams so we all meet our goals
- Working with peer leaders to establish skills reduce duplicate efforts
- Speak Networking, Database, Architecture technical talk to better delegate tasks to my teams
- Get it when someone is having a bad day

Programming Experience:

C/C++(11/14/17/20):

- Cross platform project development of Client and Server software for UNIX/Linux and Windows supporting multiple compilers (e.g. GCC, XLC, and Visual C++)
- Make use of polymorphism in designs when applicable to provide scalability and abstractions from various subsystem details (e.g. Multiple native database APIs, Mixed intercommunication link adapters, B2B integration, System I/O)
- Designing template classes and use many classes of the STL
- Utilized Boost before C++11 for many of the feature brought into Modern C++
- Designed and developed easy-to-use class libraries with exception handling used as wrappers of system level functions (e.g. Socket communication and Device Access), encryption algorithms (e.g. RSA, AES, RC4, DES, MD5, etc...) and API's (i.e. OpenSSL), 2D graphics handling, and business logic
- Designing and developed high availability secured transaction oriented systems on multiple platforms natively
- Applied ML processing in C++ using Dlib and Tensorflow for fraud analysis and optimization
- Designed and developed real-time enterprise system monitoring and alerting infrastructure
- B2B; Bridging legacy systems to modern systems with common and custom protocols
- Embedded system design and development for a variety of applications
- Developed high speed parser classes for high volumes of XML, delimited, and fixed width data
- Developed Nvidia CUDA implementations of algorithms for highest processing throughput of large datasets

R & RStudio

- Statistically based system alerting to predict the on set of problems
- Trend analysis and capacity planning
- Developed C++ modules for R to allow for multi-core threading and parallel processing on nVidia GPUs for extreme time savings for large data sets
- General statistical study of business telemetry
- Implemented R routines that utilize Nvidia CUDA
- Analysis of Data in stores of DB2, Oracle, MongoDB, Spark and file systems
- Analysis of Splunk data via REST calls

DB2 / Oracle / MongoDB / SQL Server / Sybase / MySQL / SQLite

- Server design and database layouts, setup security and automated maintenance
- Work with ODBC and native API
- Extensive knowledge of SQL both standard and native
- Use of native APIs such as DB2 CLI, NTWDBLIB/FreeTDS, OCI, mysql.lib

Work Experience —

Banker's Healthcare Group

Director IT - Software Engineering

10/2022 – Present

- Leading teams of engineers for application development
- Responsible for all integration layer development
- Leading and assisting in Research and Develop of third-party products, ML and AI research and data handling
- Change Approval Board approver
- Work with Product and Business teams to design and develop high speed critical loan processing systems
- Coordinate leaders and teams for successful product delivery
- Mentor engineers to be leaders by leveraging their critical thinking skills
- Write Proof-of-concept code in various languages in edge cases for precise understanding

First Data Corp. now Fiserv

Director IT - Application Architecture

9/2009 – 10/2022

- Designed and Developed multiple mission critical enterprise-wide processing engines in C++ for Fiserv
- Led team for development of transaction analysis models for internal and client use
- Leader of development of latency aware service pooling for Databases, REST APIs, SOA Services, and transaction systems
- Well versed in Splunk and a certified Splunk Power User
- Built and maintain a distributed monitoring facility before we bought Splunk that is still in use
- Subject Matter Expert for Debit processing and Debit Network Least Cost Routing
- Application Architect for debit processing systems
- Author of processes to handle implications of the Durbin amendment to the Dodd-Frank WallSt Reform
- Author of First Data's TransArmorTM Monitoring Backend
- Commonly write utilities for time saving, load testing, and data management

FIS / eFunds / Wildcard System, Inc.

Sr. Application Analyst

8/2001 – 9/2009

- Part of the Data Center Systems team as senior business systems analyst/developer and a financial settlement processing subject matter expert.
- Design and develop multiplatform enterprise level real-time monitoring system in C++ for support and management staff use.
- Lead a team of developers in backend systems development and maintenance
- Have also been tasked with personally leading the design and development of a business intelligence system that is now live but still evolving.
- Maintain, enhance, troubleshoot, repair and optimize processes and data used for settlement processing.
- Mining of data for research, auditing and troubleshooting.
- Expanded internal charge back system ASP interface to support Visa international charge back exhibit forms.
- Rewrote MasterCard settlement batch loaders with one other team member to support GCMS (ISO-8583) update in Java reusing existing code to meet short deadline.
- One of the few authors of SQL Server Extended Stored Procedures in the company using C/C++.
- Assisted in complete redesign of reporting system front and backend used by the company; The system was designed to use any database and run on Windows with later intent for UNIX migration.

- Assisted in analysis of business software requirements for billing, A/R, and collections.
- Implemented custom business policies to Portal Software's Infranet billing system used at iINNERHOST

Dynamic Imaging, Corp.
VP of Research and Development

8/1998 – 2/2001

- Established complete plan and process for multi-platform development of entire product suite.
- Designed standard processes for documenting, designing, and developing all software products.
- Developed training for new hires in multi-platform development methods.
- Personally responsible for all cryptographic security measures developed and implement in the enterprise class suite this included SSL communication, custom protocols based well known algorithms, certificate generation, and security auditing of client's internal and external network infrastructure.
- Consulted with clients on how they could implement or improve the security of their infrastructure from internal and external invasions with the lowest cost and simplest practices, for both Windows and UNIX systems.
- Designed and developed a multithreaded digital image storage/retrieval server that compiled on UNIX and Windows from the same C++ source code.
- Wrote many custom applications for customers using MFC, Visual Basic, or Qt depending on their needs.
- A complete set of toolkits/APIs was developed to allow customers and VARs to customize the look and feel of our document imaging product suite, these tools were in the form of COM/ActiveX components, CORBA components, C libraries, and C++ classes.
- The web product was designed to run as a stand alone server it was written primarily in C++ for high speed image rendering and conversion and used JSP to handle basic session management.

The Maxim Group
Software Developer(Short-term Contractor)

5/1998 – 8/1998

- Conducted analysis for porting an international development effort (30+ developers and three backend Web products) from Win32/MFC to a UNIX environment in C++ using NSAPI or raw CGI.
- Designed and implemented multi-platform internet protocol wrapper classes in C++.
- Demonstrated suggested approaches for multi-platform development based on analysis.
- Worked with the team on general web development tasks for their travel reservation system.

Advanced Information Technologies
Software Developer

10/97 – 5/98

- Worked on Design and development of a corporate service/repair and dispatch system for BrandsMart USA Service Center in a team environment complete with logistics support for parts inventory/usage tracking with the combined use of Visual Basic and C++.
- Multilanguage environment allowed for development of COM components using ATL to handle common transactions for speed and Visual Basic to host the components and for the GUI development based on the required business logic of the company. This was before VB supported component development.
- Developed custom applications on an as needed basis in Visual Basic and Visual C++.
- Assisted in Writing of design, technical, and user documentation.