

Stephen D. Mathews

Director IT, Software Engineering
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Helping teams build useful solutions to real problems.

I lead teams that turn hard problems into simple, fast solutions. I care about the people doing the work, and I try to beat what leaders, peers, and teams expect.

LEADERSHIP

- Teams of 25+, including three development and QA teams at once
- Capacity planning across mixed languages, platforms, and experience levels
- Connect product, architecture, infrastructure, and engineering
- Talk with executives and with junior engineers
- Align neighboring teams and cut duplicate work
- Delegate from a working knowledge of networks, databases, and architecture
- Take suggestions. Own mistakes. Notice a bad day.
- Morale and service come first

TECHNICAL

- 25+ years programming. 20 years in payments.
- C++, Java, and C# on UNIX and Windows. C++17/20 and modern concurrency.
- High-volume OLTP: debit and prepaid authorization and settlement
- AWS, Azure, fraud ML, and LLM work for documents and coding speed
- Cryptography, Qt, FLTK, embedded Linux, real-time, and micro-controllers
- DB2, SQL Server, Oracle, MySQL, SQLite, MongoDB, OCI, and CLI
- Linux, AIX, Windows, Solaris, macOS, HP-UX
- Design through deployment, business analysis, and SDLC

ROLES

Banker's Healthcare Group 10/2022 – Present

Director IT — Software Engineering

- Lead application teams and the integration layer
- Research third-party products, ML, AI, and data handling
- Change Approval Board
- High-speed loan systems with Product and Business
- Ship with peer leaders, and mentor engineers into leaders
- Proof-of-concept code for edge cases

First Data Corp., now Fiserv 9/2009 – 10/2022

Director IT — Application Architecture

- Mission-critical enterprise processing engines in C++
- Transaction-analysis models for internal and client use
- Latency-aware pools for databases, REST, SOA, and transactions
- Splunk Power User. Earlier monitoring system is still in use.
- Debit processing and least-cost routing
- Durbin-amendment processing and the TransArmor™ monitor
- Utilities for time, load tests, and data

FIS / eFunds / Wildcard System, Inc. 8/2001 – 9/2009

Sr. Application Analyst

- Settlement SME on Data Center Systems
- Real-time multiplatform monitoring in C++

- Led backend work and a business-intelligence system that went live
- Settlement repair, tuning, and data mining
- Visa international chargeback forms in the ASP interface
- MasterCard GCMS (ISO-8583) Java loaders, with one teammate, on a short deadline
- SQL Server extended stored procedures in C/C++
- Reporting redesign: any database, Windows first, UNIX later

Innerhost, Inc. 2/2001 – 8/2001

Sr. Software Engineer

- Billing, A/R, and collections requirements
- Custom policies in Portal Software's Infranet billing system

Dynamic Imaging, Corp. 8/1998 – 2/2001

VP of Research and Development

- Multi-platform plan, process, and new-hire training for the suite
- Cryptography: SSL, custom protocols, certificates, and client network audits
- Low-cost Windows and UNIX security advice for clients
- One C++ image server for UNIX and Windows
- Customer apps in MFC, Visual Basic, or Qt
- VAR toolkits: COM/ActiveX, CORBA, C, and C++
- Stand-alone C++ web image server, JSP for sessions

The Maxim Group 5/1998 – 8/1998

Software Developer (short-term contractor)

- Port study: 30+ developers and three web backends, from Win32/MFC to UNIX C++ (NSAPI or CGI)
- Multi-platform protocol wrappers, and a demonstration of the approach
- Web work on the travel reservation system

Advanced Information Technologies 10/1997 – 5/1998

Software Developer

- Service, repair, and parts-tracking dispatch for BrandsMart USA, in Visual Basic and C++
- ATL COM for transactions and Visual Basic for the GUI, before VB built components
- Custom apps, plus design, technical, and user docs

TECHNICAL DEPTH

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

- UNIX/Linux and Windows clients and servers: GCC, XLC, Visual C++
- Polymorphism, templates, and the STL over databases, links, B2B, and I/O
- Boost before C++11, for features later added to the language
- Libraries for sockets, devices, OpenSSL (RSA, AES, RC4, DES, MD5), graphics, and business rules
- Native high-availability transaction systems
- Dlib and TensorFlow for fraud analysis
- Real-time monitoring, B2B bridges, and embedded systems
- Fast parsers for XML, delimited, and fixed-width data
- CUDA on large data sets

R and RStudio

- Statistical alerts, trends, and capacity planning
- C++ modules for multi-core and NVIDIA GPU work
- Telemetry, CUDA routines, and analysis of DB2, Oracle, MongoDB, Spark, files, and Splunk

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

- Design, security, and automated maintenance
- Standard and native SQL
- ODBC and native APIs: DB2 CLI, FreeTDS, OCI, mysql.lib