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OBJECTIVE I am seeking a senior technical position where my many years of global experience designing, managing and developing solutions for financial services will be utilized within a team of highly motivated and skilled individuals.

CAREER ACHIEVEMENTS Led the team that developed a high performance and scalable web based portfolio management system.

Implemented portfolio investment algorithms in C++ and MatLab. The algorithms utilized advanced risk modeling and portfolio optimization techniques to suggest the optimum trades. The algorithms consider and rank numerous trade scenarios, working towards the investment goal while adhering to numerous restrictions (Compliance, Preferences, Investment Mandates etc.).

Inventor of a multiple channel banking solution (US Pat 6,119,104). This concept and design won a Smithsonian award for Innovation in Financial Services (nominated by Bill Gates). The design is now in the permanent archives of the Smithsonian innovations library.

Asked by Microsoft to assist them with their strategy in financial services. I was a contributing member of the DNA/FS Advisory Council and the DNA/FS Schema Working Group.

Customized and implemented a NoSQL distributed database to process petabytes of data. Processing of the data is with a Map Reduce based architecture of my own design.

Created a trading and analytical task distribution infrastructure that facilitates efficient message routing between many servers within a processing grid. The processing grid scales up and out effortlessly, the system self tunes by dynamically optimizing its load-balancing algorithm.

Lead the first international project for AIT PLC, a UK based company, by bringing a team to Cleveland, OH. The success of that project led to the formation of AIT (USA) Inc, a subsidiary of AIT Plc. I assisted the company's formation by defining the technical strategy for all North America operations.

I developed of some of the core components used across the AIT product suite (Web UI Framework, Website content management system, Browser based CTI (Ajax based), XML message transport and distribution, task matching and workflow modeling).

Initiated advanced research projects in business and technical arenas. Some of these projects proved beneficial, realizing significant income and opportunity for AIT.

As Senior Systems Designer/Programming Specialist at Dun and Bradstreet Europe, I led several teams through the design and development of a customizable N-Tier office automation solution for all European offices.

Experience

*Senior Technical Lead
Boston, MA*

*Thomson Reuters
October 2009 – Present*

I have designed a system that publishes economic *market moving* data to Wall Street and trades are made based on that data in less than 0.1th of a second. I am the Senior Technical Architect and Manager for a geographically disbursed team – teams members are located in London, Minsk, Bangalore and Beijing. I am responsible for the overall strategy of the group and manage day to day tasks assignment for the team. I have successfully introduced an Agile based development methodology to the group. Since I have been running the team Thomson Reuters have moved from last place to first place vs. their competitors in this space.

*Founder/CTO
Holliston, MA*

*Awl Reet LLC
May 2008 – October 2009*

I am a founder and lead engineer for Awl Reet LLC which is developing the next generation web search engine, yielding results for the searcher that greatly surpass the relevance of those provided by the previous generations of search engines.

My work with Awl Reet has involved researching internet search engines and designing a competitive alternative to Google. The system uses many of the scalable architecture components first described by Google. i.e. A distributed file system (GFS), a key value pair scalable database (BigTable) and task distribution and execution model (MapReduce). I have designed and developed all of the architecture in C++ to run within a grid of commodity servers running Ubuntu. I produced custom versions of KFS and Hypertable and developed my own implementation of a Map Reduce processing architecture.

The rendering side of the system (the website) is developed in PHP and utilizes jQuery and communicates to the service layer via a RESTful interface. The interface makes use of AJAX to enhance the UI and make it more responsive and interactive.

Primary skills used: C++, STL, Map Reduce, Ubuntu, Ajax, HTML, CSS, Javascript, JSON, XML, PHP, MySQL, HQL (Hypertable NoSQL), \LaTeX , Agile development

*Senior Software Architect
Boston, MA*

*Novell
Sep 2008 – Nov 2008*

I was part of an advanced research team engaged to develop concepts and proposals for a innovative web based collaboration services. The system is a ground up development intended to replace Novell's current collaboration services.

The research culminating in a set of proposals for a next generation system. We also developed a working website prototype which extensive javascript interaction and dynamic content (Ajax).

This was a contract position. I was asked if I wanted to join Novell as a full time employee but that would have required a move to Provo, Utah.

*Senior Software Architect
Boston, MA*

*CheckFree Investment Services
August 2007 – May 2008*

CheckFree Investment Services purchased Upstream Technologies in August of 2007.

As Senior Software Architect of Advanced Trading Solutions for CheckFree Investment Services, I held a key role in the responsible for the integration of the Upstream systems and the CheckFree infrastructure. This included architecting, planning and developing a new C#/ASP.NET web site.

I training and mentored new development, QA and management personal on the Upstream system.

Introduced Microsoft Team Server to the development cycle, replacing a number of older non connected systems.

I provided valuable contributions to the sales and support deliverables. The clients and account managers consulted with me to validate and refine requirements on many projects.

Architected and implemented a web based scalable order management system based on FIX.

*VP of Engineering, Research and
Investment Group
Cleveland, OH and Boston, MA*

*Upstream Technologies
Feb 2002 – August 2007*

I implemented the production version of Upstream's portfolio construction algorithms. I led the research team, leading us through the transition from an academic prototype to a production implementation.

I helped the quantitative researchers refine the algorithms (originally implemented in MatLab) by applying engineering techniques to the environment and closely

mentoring their development effort.

The quality of the results from the algorithms and the flexibility of the architecture helped Upstream become the market leader in browser based SMA portfolio management.

I relocated to the Boston headquarters in 2004 to take on a more central role in the quantitative and engineering teams.

I created and led the effort to adopt development standards and techniques across all of the Upstream engineering teams. The adoption of these practices led to increased product performance, shortened development cycles and increased quality. I trained staff and showed the benefits of an Agile development methodology.

*Lead Technical Architect
Cleveland, OH*

*AIT US Inc
Dec 1995 – Jan 2002*

As Lead Technical Architect for AIT US based operations, I defined the US technical strategy and assisted with product road map. I led the architecture team responsible for developing components essential to the strategy.

As an experienced and regarded senior technical resource I advised all of the project teams.

I was one of the inventors and lead technical architect for the 'Composite Banking Desktop' solution for KeyCorp. This design patented by KeyCorp, listing me as an inventor. The design was used as the basis for all AIT banking project worldwide. The design won a Smithsonian Award for Innovation in Financial Services (nomination by Bill Gates)

I was invited by Microsoft to advise them on there financial services technical strategy via the DNA/FS council. I was also invited to contribute to the DNA/FS Schema Steering committee.

I was chosen to lead the first international project (KeyCorp in Cleveland) by the group CEO.

*Lead Technical Architect/Principal
Systems Engineer
Henley-on-Thames, UK*

AIT PLC

Apr 1993 – Dec 1995

I helped AIT adopt and implement object orientated development technologies.

I developed coding standards, build procedures and held design reviews for many projects.

I designed several of AIT's products and consulted on many others.

Some of products I developed for AIT PLC include:

- Distributed stock trading system
- Desk (Trading Floor) trading system
- Resilient equity pricing system
- Scalable order processing system

Senior Systems Designer Programming
Specialist

Dun and Bradstreet

High Wycombe, UK

Jan 1989 – Mar 1993

As Senior Systems Designer/Programming Specialist, I designed and implemented a distributed N-Tier system that was used in all of the European offices.

This involved the creation of communication architecture that distributed application logic across tiers and provided resilient data transfer.

The system was multi currency and multi language and allowed localized customization by the users.

Systems Engineer
Maidenhead, UK

GPT Datasystems

July 1987 – Dec 1988

As systems engineer, I designed and developed and support various embedded protocol converters and access points for the travel and telecommunications industries.

SKILLS

Programming Languages: C++, C#, C, VisualBasic, Matlab, SQL, XML, XSL, XSD, Perl, PHP, HTML, Javascript, VBScript, PowerShell, Unix Script (born,korn,ksh etc.), Assembler.

Technologies: .NET, Standard C++Library, DoJo, jQuery, Generic programming, Internet Technologies (HTTP, FTP etc), Microsoft technologies (MFC, .NET, ATL, COM, GDI, MSMQ etc.), Apache, SQLServer, MySQL, sed, awk, yacc.

Operating Systems: Windows, OS X, Linux, Unix

Tools: L^AT_EX, Microsoft Office, Microsoft Team, Rational Suite, Visio, Microsoft development suite, gcc, csv, Subversion, Tortoise, gnuplot, GIMP, Photoshop etc.

Others: Detailed and thorough designs for large and small systems, Creation and promotion of best in class development practices, Architecture design and implementation of enterprise systems, Multi faceted development skills, Requirements creation and analysis, Strategic technical planning, Workflow and business modeling, Product creation, Optimization, Product Enhancement, Technical writing, Creative problem solving, Technical Team Leadership/Mentoring, Project Management, Pre-Sales and Marketing Support

EDUCATION Oxford and Cherwell Valley College, Oxford, UK
OND in Computer Science, June 1987

Brookes University, Oxford, UK
HNC in Computer Science, 2 Terms

OTHER LinkedIn profile with recommendations: <http://www.linkedin.com/in/timothyvarley>
WebSite: <http://www.mothsystems.com>