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OBJECTIVE: Looking for engagements as software architect and engineer – esp. involving data science techniques

SUMMARY: Architecture, design, and development for systems and applications. Specializing in Java with 20+ years of industry experience and with all aspects of the software development lifecycle. Data scientist with background in applied math and physics.

I believe that requirement and problem analysis by generalization and abstraction allows us to reduce the complexity of an implementation while maintaining a very high level of functionality and productivity. I lead with clear articulation of the principal ideas of a design, problem, or solution, and can also offer persuasive and effective mentoring of a team.

TECHNOLOGY EXPERTISE:

> **Java: Java Open Source, J2EE, Maven/Ant/Eclipse, Spring Framework, OOP, XML, JMX**
> **Databases/stores: relational - Oracle, MySQL, PostgreSQL, SQL Server, SQL and JPQL; non-relational - Redis, Couchbase, Cassandra**
> **Web/API application technologies: Velocity, JSP, MVC, Jersey REST, JavaScript, jQuery, HTML, HTML5**
> **Other: UNIX shell and tools, TCP/IP, HTTP, tcpdump, Visual JVM; C/C++, Python, Perl, CVS, Subversion, git**
> **Also: C#/NET, NodeJS/Javascript, functional programming**

PROFESSIONAL HISTORY – in Seattle area since 1994

Sept 2014 – June 2016 – Software Architect, SoftSource Consulting, Portland/Seattle

For a complex multi-player online game for the Windows platform, I architected and designed a complete system of distributed diagnostic capture and storage This work included identifying thousands of independently reported client session diagnostics and correlating them with server-side logs. This feature depended on my implementation of accurate time estimation in client systems. These changes were implemented involving different platforms and languages: working in C#, SQL Server, C++, and on Linux.

For a young company with an existing product I implemented a version 2.0 platform in Java, JPA/Hibernate, JSON, MySQL, and WildFly/JBoss. I architected and designed an application-level framework that allowed user to extend and customize the available persistent entity types with minimal disruption to operations. The project involved creation of JPA object scheme that interacted with a dynamic type management system. I evaluated MySQL and Cassandra as datastores, and implemented the framework. I also designed and developed a subsystem that generated and compiled Java code extensions and executed user-specified JavaScript code inside the Java application.

July 2010 – Sept 2014 – Sr Software Engineer, Nuance Communications acquired from Tweddle Group Technologies - Java, Tomcat, Oracle DB, HTTP-based API, wireless/automotive service delivery – Toyota Entune and Lexus Enform products

Designed and developed middle tier Java-based software platform supporting the client systems on wireless hand-held and vehicle-based devices through server API, brokering services from 3rd party providers.

Functioning as technical lead and architect consulting to other teams, I initiated numerous architectural and technological improvements in the software: use of JAXB and XML schema for API definition, use of JAX-RS REST Jersey framework, low-level methodology for interacting with Oracle database, and annotation driven transactions. These improvements accelerated software development by the whole team.

Architected, designed, and developed interaction with voice processing services from audio and grammar to semantic understanding.

Architected a distributed logging system using message queues as intermediate storage.

Architected, designed, and developed processes using message queues to distribute the work load.

Acted as a security architect with respect to public/private keys, OAuth, and the Spring Security layer.

Diagnosed challenging connectivity issues analyzing data traffic at the HTTP and TCP levels using tcpdump/wireshark.

Evaluated ESB technologies as server-side containers - Mulesoft.

Mentored developers in architecturally appropriate and effective use of the Spring framework and dependency injection.

Coded in Java, used Tomcat, Oracle database, serving HTTP-based API for wireless/automotive service delivery.

September 2008 – July 2010 - Marchex - Sr Software Engineer, Java, MySQL, internet advertising platform, web serving and web event tracking

carried out major implementations of the advertising platform including web serving with variable content, web event tracking and reporting

designed Java software, SQL queries as well as data models supporting persistence of change history

implemented advertising campaign management system as an automated control system

April 2006 – September 2008 - contract work Boeing/CDG projects - Sr Software Engineer, Java, Oracle, XML, web application development

online airplane documentation for 787 and other Boeing airplanes implementing a database supported complex version control system with indexing and searching using TeraXML search technology

worked on a complex system of versioning of structured content for the 787 airplane documentation

created and maintained a custom build and deployment system for use by development and QA based on Ant, Rational ClearCase, CruiseControl and JMX

February 2005 – March 2006 – Sr Software Engineer at Sproqit Technologies; software products providing remote secure access to application data for mobile devices

designed and implemented data transfer feature for delivery of generic binary content and media to/from mobile devices

created a Java/JMX based console to monitor the behavior of Sproqit discovery service

worked in C/C++ under MS Windows needed for multiuser and scalable server features, and on shipping Workgroup Agent Sproqit server product, implemented licensing features for Workgroup

interaction with MS SQL Server, multithreading under Windows, TCP/IP, programming a server with asynchronous event-driven architecture

June 2003 – February 2005 - Software Development Engineer at Amazon.com; support and software development in the area of external fulfillment - interaction with outside vendors

worked on large full-featured top-level business workflow backend application with evolving features interfaced to other business subsystems - order pipeline, payments, customer returns, inventory management, vendor/merchant connectivity, item catalogs - using a variety of connectivity techniques

part of team charged with integrating a large number of new outside vendors into the Amazon system

part of team charged with refactoring of Amazon legacy code to suit changing needs

worked with Oracle databases - using SQL, PL/SQL and Oracle-specific features such as message queues, programming SQL access with Oracle specific accessors with C++, perl and JDBC

operated software in production environments running applications interacting with Oracle databases and messages queues

Before 2003

February 2002 - December 2002 - senior software engineer at Hynomics Corp, (now Clearsight Systems); design and implementation of software components containing mathematical algorithms for optimization of business operations

June 1998 - September 2001 - senior software engineer at Graphon Corp.; products: *GlobalHost, Bridges for UNIX, GO-Global UX* - application server software

April 1994 - May 1998 - senior software engineer at Exodus Technologies/Connectsoft; product: *NTERPRISE* application server for Windows NT3.51

September 1991 - April 1994 - Lawrence Livermore National Laboratory and National Energy Research Supercomputer Center, 1991-1994, Livermore, CA

May 1985 - September 1991 - research work as doctoral candidate and postdoctoral associate on computational projects: Indiana University 1985-89, Princeton University, 1989-90; Ohio State University 1991

OTHER SKILLS, ACCOMPLISHMENTS, PUBLICATIONS, PRESENTATIONS, MEMBERSHIPS, ETC:

- Key design engineer on these commercial software products:

    2011 – Tweddle Group Tech Entune for Toyota – wireless connected vehicle application access

    2001 - Graphon: GlobalHost, Bridges for UNIX, GO-Global for UNIX – thin-client remote application access

    1997 - Exodus Technologies: NTERPRISE multiuser version of Windows NT - Windows application access for UNIX/X11

- Also helped ship: **2005 – Sproqit: Workgroup Edition – thin-client remote application access for wireless devices using Windows-based servers**

- languages: fluent written and spoken English; speaks/reads/writes French well; Russian and German in reading/writing;

native speaker of Polish

- advocacy of "Java as Application development platform for UNIX" –two-part talk at Seattle Unix Users in 2003 http://www.dikte.net/junix_html
- named on approved US Patent filed in 2012 for systems involving automotive head units
- Open Source projects – http://www.dikte.net#OpenSource: Redis-JD Java driver for Redis datastore; medit – simple Java Swing UI text editor
- dual citizen of U.S. and Poland (member of EU)

EDUCATION

(a) PhD. in chemical physics, Indiana University 1989; specialized in computations of electronic structure and interactions of molecules; (b)one year of graduate computer science coursework - Ball State University, Indiana; (c)doctoral candidate - University of Gdansk, Poland; (d) Master's of Physics, 1981, Nicolaus Copernicus University, Torun, Poland