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|  | **MARK D. FUINI**  Fort Lauderdale, FL  [markfuini@yahoo.com](mailto:markfuini@yahoo.com)  954-654-0406 |  |

**SUMMARY**

Hands on AWS certified software professional with over 15 years experience architecting, designing and implementing software systems, assists organizations by utilizing his skill set to solve complex business problems recently with big data

**RECENT ACCOMPLISHMENTS**

* Provided consulting for a building data exchange for terabytes of data:
  + Built identity tracking and data ingestion online and batch processing data pipeline using Java, REST, and Rabbit MQ
  + Designed and implemented a driven us postal address on-boarding system using AWS auto scaling and SQS
  + Lead and participated in the transition from a server side HTML generation legacy management portal to a SPA based application using Angular.JS and Java REST
  + Create a change data capture (CDC) mechanism for MySQL to transfer terabytes of data into Amazon Redshift
  + Invented a query workflow markup language to generate queries for dynamic, complex workflows during runtime for analytics and data pipelines in Redshift
  + Prototyped, costed, performance evaluated, and designed a NoSQL data store identity solution from the leading NoSQL vendors
* Provided consulting for DoD defense projects:
  + Assisted developing a federated architecture to query across geographic and DoD department locations to assemble financial data for reporting
  + Lead for SCCM automation effort using puppet to update web servers and install software for DoD auditing project
  + Designed, architected, and coded a theater military information system, TMIP
* Provided Big Data consulting for customers:
  + Lead for Hadoop re-engineering of rental car company month end processing and restatement using Cascading to provide business results faster through parallelize processing
  + Hadoop architecture development for transportation client including component, distribution evaluation, and benchmarking.
  + Participating in a complex analytics project joining disparate data sets in the transportation industry using workflows in Hive to present a unified time based Geospatial view of system usage for visualizations
  + Team Lead faceted search proof of concept in Hadoop using HBase, Solr, and Blacklight.
* Created new features and supported a performance data collection agent, portal, and PDB data ingestion

**SKILLS**

**Languages:** Java, Python, Puppet, C++, C, C#, VB, VB.NET, ASP.NET, JSP, Objective C, AJAX, JavaScript, VBscript, COM, HTML, PLM, Assembly, Pascal, Lisp, FORTRAN, Matlab, Octave, SQL, PL/SQL

**Big Data:** Hive, Pig, Cascading, Lingual, HBase, Oozie, Kerberos, Map Reduce, MRJob, Hadoop Distros (Hortonworks, Cloudera, Apache), Datameer; **Visualizations:** Tableau

**Frameworks:** J2EE, NumPy, SciPy, Pandas, Solr, Hibernate, Struts, MVC, iUI, EAD4J, .NET, WPF, MVVM, Windows Mobile, ATL, MFC; **IDEs:** IntelliiJ, Spyder, Eclipse, Visual Studio, xCode

**Application Servers:** Websphere, Tomcat, Weblogic; **Middleware:** SQS, IBM MQ, Websphere, MQ, Rabbit MQ, Active MQ,

**No SQL Databases:** Dynamo DB, Mongo DB, Redis, Aerospike, Couchbase; **Relational Databases:** MySQL, SQL Server, DB2, MsAccess, Visual Fox Pro; **Data Warehouse**: Redshift

**Machine Learning Algorithms:** Linear & Logistic Regression, Naive Bayes Classifier, Random Forests, Neural Networks, K-Means Clustering, TF-IDF, Support Vector Machines, Recommender Systems, Anomaly Detection

**Operating Systems:** Linux (Centos, Ubuntu, RHEL), Windows (Vista,7,2008 Server,CE**,**XP,2000,2003 Server, NT, 95, 3.1), iOS, OS X Lion, UNIX, AIX, MS-DOS; **Virtualization:** VMware, Virtual Box

**Cloud Computing:**  AWS, EC2; **Computing Platforms:** Intel, 8086 & 68000 based embedded, Sun, IBM RS/6000

**Home Office:** Separate Area, Windows 7, Fax, Printer, Business Class High-Speed Internet

**WORK HISTORY**

***Principal Software Consultant, M. David Consulting, Inc.***

**July 2014-Present**

**Big Data Exchange (BDEX), Java, Tomcat, REST, Redshift, MySQL, Angular.js, AWS, S3, EC2, Linux, SQS, Rabbit MQ, Wijmo, NoSQL, Dynamo DB (Remote)**

* Developed full stack and system solution architecture and provided production support and performance monitoring using New Relic and Tapiki of real-time marketing data exchange for the ad tech industry on EC2 in AWS including data ingestion for billions of data points in real-time
* Developed a big data query workflow generator in Java with the Groovy Script Engine to allow conditional redshift workflow queries to be built to dynamically for customer data extract purchases depending on various campaign settings
* Enhanced legacy tomcat JSP customer portal in transition to a single page web app using angular.js and rest services eventually using Wijmo
* Utilized SQS and AWS auto scaling to scale the system’s ability to process address records for data ingestion
* Developed web service APIs for identity registration and buying and selling of data using Jersey REST
* Utilized Rabbit MQ for offline ingestion of data from disparate customers
* Developed and assisted in design of a change data capture system from MySQL to Redshift using SQS for workflow using S3
* Developed table driven workflow engine for Redshift for data algorithms including the BDEX identity repair
* Worked on various system batch jobs for downloading data, aggregations, and data ingestion
* Developed python tool to create industry taxonomy java script files
* Developed next generation prototype of identity service using Dynamo DB and evaluated Couchbase, Aerospike, and Cassandra
* Evaluated Redis, Dynamo DB, Aerospike, and Couchbase for identity service use case with regard to POC performance, suitability, and hardware, licensing, and management costs.
* Created auto scaling using AWS for processing us postal address data ingestion to meet performance requirements

**October 2012-July 2014**

***Senior Big Data Solutions Developer, Spry, Inc.***

**Java, IntelliJ, Hadoop (Hortonworks, Cloudera), Hive, Pig, Cascading, HBase, Kerberos, Map Reduce, Linux (Centos, Ubuntu), Cloud Computing (AWS, EC2), Platfora, Datameer, Tableau (Remote)**

* Technical lead for re-engineering project for Fortune 500 car rental company month end processing and restatement on Hadoop using Cascading.
* Team Lead for HBase Faceted Search POC with Solr and Blacklight
* Hadoop R&D prototypes for technologies such as HBase and algorithms such as Naive Bayes Classification using python and MRJob
* Utilized Tableau for visualizations and evaluated Platfora
* Performed TF-IDF analysis using Cascading on free form comments in radiology reports to evaluate hospital performance.
* Created a location obfuscation algorithm in Hive for customer transportation data client
* Lead evaluation of Hadoop distributions and technologies for transportation industry client.
* Lead Hadoop architecture development, distribution selection, and analysis of alternatives effort for transportation client. Personally evaluated about a dozen technologies in several weeks.
* Scoped and architected incoming projects as needed
* Contributed to new hire training both technology and teamwork along with mentoring junior developers.
* Assisted in the development of a federal architecture to consolidate geographically and departmentally diverse data sources into a consolidated schema for reporting purposes.
* Maintained legacy REST federated query proxy engine for Military data consolidation effort.
* Lead SCCM work to standardize role out and automation processes with tools such as Puppet

***June 1997-* October 2012**

***Principal Software Consultant, M. David Consulting, Inc.***

**RELATED PROJECTS**

**Triad Biometrics LLC, Fingerprint Matching System - Java, JavaScript, VBScript, JNI, AJAX, JSP, Eclipse 3.3, Websphere 5.1, Weblogic, Tomcat 5, SQL Server, DB2, Oracle, VMWare, Install Shield Pro 2008 Pro, Serena, Tortoise SVN (Remote)**

* Acquired all software development responsibility for beta release of fingerprint authentication system from offshore vendors including development of the administration Java web application and fingerprint matching server.
* Made modifications to the finger print matching server to interface with the fingerprint matching SDK to utilize

Oracle, SQL Server, and DB2 through a data layer so that multiple databases could be supported simultaneously.

**IBM, Contractor Sourcing Application - EAD4J, Java, AJAX, JSP, Websphere 5.1, DB2 (Remote)**

* Lead development team in worldwide full lifecycle development of IBM’s global contractor purchasing system as a member of a remote team. Created low level and high level designs for implementation and tracked implementation.

**LaSalle Broker Dealer Services, Bond Trading - Java, JSP, Websphere, IBM MQ, XSL/XML, Windows, SQL Server**

* Performed maintenance and enhancements on Websphere Bond trading application which allows clients to purchase bond products.

**Office Depot, International E-Commerce Website - Java, JSP, Websphere 5.1, Windows, SQL Server, SAP**

* Participated in the internationalization and SAP conversion of the company’s European business services website.
* Converted existing code base to use SAP by creating data access objects for SAP by interfacing with the IBM JCA proxies.
* Internationalized JSP pages and Struts forms and actions to match new business requirements.
* Lead team to develop custom catalog functionality for individual users. Coordinated efforts of developers and database team within project plan.

**Citrix Systems, Software Licensing Application - Java, JSP, Apache Tomcat, Windows, SQL Server**

* Extended and customized the Java Globetrotter licensing application written by Macrovision on Windows in Tomcat for the specific licensing requirements of Citrix Systems

**Miami International Airport, Security Badge Tracking System - EAD4J, Java, WSAD, Websphere 5.0, AIX, Oracle**

* Participated in a project to reengineer the Miami airport’s security badge tracking system to run under Websphere 5.0 on the AIX operating system with an Oracle 9i database.
* Deployed the application on the Websphere Application Server running on AIX
* Configured and utilized the IBM Websphere test environment for unit testing.

**Blue Cross Blue Shield Compensation System - RUP, UML, JSP, EJB, IBM Websphere, DB2, Windows 2000**

* Performed duties as an application architect in an effort to re-engineer disparate legacy systems utilized to calculate and distribute producer compensation into a centralized flexible component based system.

**Southwest Research Institute, Theater Medical Information Program - C++, UML, XML, COM/DCOM, ATL, MFC, Windows NT**

* Participated in the architecting and implementation of a medical information system to serve the military.
* Utilized UML and Rational Rose to design use cases; collaboration diagrams, and sequence diagrams to describe the software design and interaction of system components.

**IBM, ViaVoice 2000 - C++, COM, MFC, Windows 9x/NT**

* Upgraded user interface to have a more ‘IE Explorer’ look than ViaVoice 98.
* Replaced portions of existing code base with functionality provided by new COM objects.

**IBM, ViaVoice Speech Recognition Software Development Kit - ATL, C++, COM, Windows 9x/NT**

* Participated in the development of a suite of ATL ActiveX controls to enable independent software vendors to develop speech enabled applications.

**Alpine Engineered Products, Automated CAD Software Application - MFC, C++, COM, Windows 95/N**

* Performed research and applied knowledge gained to developing an object oriented component-based architecture of an existing software application.
* Determined a path of migration towards total re architecture, yet still allowed newly created objects to be used in conjunction with over 1,000,000 lines of existing “C” code.

**J. P. Morgan, Global Cash Management System - MFC, C++, COM, Windows NT, OO, Booch, Unix, Encina++**

* Designed a manual item matching GUI on Windows NT 4.0 using the object oriented Booch methodology and Rational Rose. Used object oriented design patterns to isolate GUI code from dependencies on data services by implementing a COM database wrapper.

Previously employed as Software Engineer with Lockheed Martin Corporation (May 28/1996-June 5, 1997); Development Engineer with Syncro Development Corporation (September 13, 1993-May 24, 1996); Software Engineer with Environmental Tectonics Corporation (July 21, 1992-September 10, 1993); Apprentice Software Engineer with Cadre Technologies (May 20, 1991-December 20, 1991).

**EDUCATION**

**Rensselaer Polytechnic Institute**

**Bachelor of Science, Computer and Systems Engineering**

*Rensselaer Polytechnic Institute, Troy, New York*

**Villanova University, Villanova, Pennsylvania**

**Course Work for Master of Science, Computer Engineering**

*Villanova University, Villanova, Pennsylvania*

***Coursera***

*University of Washington,***Intro to Data Science,** *Bill Howe***, Ended June 2013**

*Stanford,* **Machine Learning,** *Andrew Ng***, Ended December 2013**

*University of Washington,* **Machine Learning: A Case Study Approach,** *Carlos Guestrin and Emily Fox*, **Ended October 2016**

\*References available upon request.