

JEFFREY M. LUTZ

Columbus, OH • 614.783.9451 • jeff.lutz@agileanswers.com

MACHINE LEARNING SPECIALIST / ENGINEERING

HIGHLY ACCOMPLISHED PROFESSIONAL WITH A TRACK RECORD OF INNOVATION AND SUCCESS — Offer a history of contributions in Big Data and a recent focus/training in Machine Learning. Engaged in Deep Learning, Computer Vision, Sensor Fusion, Localization, Control, Path Planning, and Systems modules. Background introducing and guiding the adoption technologies to provide cost-effective means to capture, integrate, analyze, and report data.

EXPERTISE IN ALL FACETS OF THE SOFTWARE DEVELOPMENT LIFECYCLE — Proven success in leveraging Agile and RUP development methodologies to enhance the capture and alignment of technology investments with business goals.

QUICK TO ANALYZE ISSUES, IDENTIFY ROOT CAUSES, AND APPLY SOLUTIONS — Strength in assessing, recommending, and developing proofs-of-concept, and implementing tools, models, frameworks, and best practices.

CONSULTING EXPERIENCE

AGILE ANSWERS, LLC • Columbus, OH

Big Data / Enterprise Architect Consultant, 2003-present

Consult with leadership, technical, and business teams to identify needs and issues, define strategy, and fuel architectural design of value-driven solutions to enhance decision making, reduce costs, and meet regulatory requirements. Completed extensive professional development, recently engaging in Machine Learning courses, in addition to training in C/iOS, Data Science, and R programming. Amassed extensive experience with Python / Jython and Virtualenv (Python 3), in addition to Anaconda for machine learning with Scikit and TensorFlow.

KEY ENGAGEMENTS —

Department of Homeland Security, 2014-present

Engaged as a software Architect porting 17 mission-critical JEE and C++ applications to AIX OS and Weblogic 12C, executing project 60 days ahead of schedule and under budget. Triage, diagnosed, and resolved problems with concurrency of processing messages within J2EE and C++ applications. Designed an automated testable application allowing SME the freedom to proceed without technical support. Leveraged docker containers for releases.

- ➔ **Addressed headcount challenges by introducing automation**—CI, functional testing, and devops—to maximize productivity with minimal resources, bringing project to a close 2 months ahead of schedule and under budget.
- ➔ **Introduced agile principles and unit tests across all code (87% code coverage per Sonar)**; set-up Jenkins Continuous Integration for automated build, using Maven for build scripts and Nexus for artifact repository.
- ➔ **Formulated an environment with two production environments**—active and inactive—to allow for update deployment during business hours and instantaneous change to a network switch (BigIP/F5).

Citigroup, 2012-2014

Recruited as the Subject Matter Expert (SME) to assist in establishing the Big Data & Analytics Department. Following success, retained to analyze and develop proof of concept (POC) utilizing Big Data technologies to reduce costs. Created a scalable Flume NG design that enhanced the administration of file- and socket-based content.

- ➔ **Played a pivotal role in building the Hadoop ecosystem** to centralize and enhance visibility of 1.3+ petabytes of transactional data. Trained staff on Big Data, and offsite developers on Datameer and Shark BI platforms.
- ➔ **Recommended the migration of mail activity data** from proprietary technology to Hadoop / Hive environment to realize \$1.34+ million in savings in 3 years.
- ➔ **Delivered \$21+ million in technology upgrade costs** on architecting and presenting an Impala-based proof-of-concept design for stock trading activity data.

- **Championed the integration of network router activity log data** into Impala / Hive, reducing costs of auditing network activity and met new regulatory requirements.

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Ohio Department of Mental Health, 2011 to 2012

Led development of a web-based, automated billing system, leveraging Cassandra for high availability multi-master data store and Hadoop for batch processing. Architected initial proof-of-concept design, captured requirements, and led team of 7 in delivering the open-source billing system that replaced costly mainframe application with a commodity-based platform. Introduced domain-driven design and test-driven development methodologies across the enterprise.

- **Drove the adoption of Agile development methodology and JQuery and Knockout technology** that enabled the rapid prototyping of solutions and the capture of more detailed business requirements.
- **Advocated value-proposition of Hadoop and Cassandra technologies**; developed proof-of-concept, demonstrating effectiveness to reduce processing timeframe from 6+ hours to less than 30 minutes.
- **Introduced Clojure-based Pallet configuration management and provisioning tool** that greatly reduced costs of provisioning Suse Linux platforms. Educated infrastructure team on new technology.

Honda of America, 2005-2011

Retained to enhance and scale newly developed ERP system to enable the successful rollout to 12 additional manufacturing sites. Based on success, led the full lifecycle design and development of new systems to automate manual processes, eliminate legacy systems, and reduce downtime of manufacturing operations.

- **Gained approval from leadership to utilize Big Data technologies** to solve large-scale manufacturing problems. Developed proof of concepts to address failure of commercial software using relational database. *yielded a 23% reduction to maintenance-related downtime; provided the means to assess productivity across the enterprise.*
- **Recommended and built a configuration management platform and source code repository** that provided a standardized means to track and control changes across portfolio of 52 applications. Solution provided a reliable means to rebuild an environment while reducing human errors and achieving Sarbanes-Oxley compliance.
- **Led the redesign and development of J2EE-based ERP system** that allowed 14 manufacturing sites to access key data. Introduced Hadoop framework to enable parallel processing and reporting across 2,000 data nodes.
- **Redesigned persistence layer for ERP system** and developed SQLJ bound data packages to abstract data residing on DB2 database; reduced CPU processing on the Mainframe and eliminated \$774K Mainframe upgrade.
- **Architected manufacturing control system for new plant** in Indiana leveraging Java, Spring, and Websphere 6.1 technologies. Led team of 15 in developing new distributed application to effectively control production lines.
- **Designed and contributed to developing a Java-based VIN stamping assembly line application** to replace legacy system. Application integrated with PLC and RFID devices to automatically create VIN tags for vehicles.
- **Played a pivotal role in building a new Java stamp conveyor storage system** to eliminate potential production downtime. Developed physical and logical models, created rules, and designed control application.
- **Member of Incident Response Team** charged with analyzing and resolving critical application issues. Identify root causes and collaborate with application, networking, database, and infrastructure teams to implement solutions.

Motorist Insurance, 2004-2005

Guided the full lifecycle design of a web-based eQuote system aligned with newly developed Risk Assessment Model utilizing Service-Oriented Architecture (SOA). Conducted a comprehensive assessment of existing applications to determine robustness for rapid user growth. Identified issues and redesigned persistence layer leveraging a Spring framework to improve overall scalability. Architected, designed, and delivered a robust eQuote system.

- **Developed a liability exposure rules engine to automatically capture** data from DB2 z/OS system in adherence with response time goals. Implemented an object-caching approach to share Java objects in a large memory pool.

- ➔ **Advocated the migration of Java applications** from Websphere under z/DB2 to Tomcat under Linux, eliminating performance issues. Demonstrated the effectiveness of Open Source technologies to infrastructure team.

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OCLC, 2003-2004

Built a Technical Support Forum to enable small non-profit organizations to provide support to end users in response to a grant from the Bill and Melinda Gates Foundation, leveraging Struts and JBOSS across clustered Linux environment.

FOUNDATIONAL EXPERIENCE

NATIONAL CENTURY FINANCIAL ENTERPRISES • Dublin, OH

Software Architect, 2000-2003

Retained as a consultant to develop a web-based investment management system to replace limited AS/400-based application. Recruited as an employee to design and implement key functionality reduce expenses and increase agility.

- ➔ **Developed an Intranet portal to enable investors to view and process transactions** leveraging iPlanet application server and iPortal tools with TOPLink as the persistence layer.
- ➔ **Designed a Client Management System** leveraging J2EE architecture across BEA Application Server and BEA Portal Server to capture, approve, and process payments and investments across the enterprise environment.

NGDA INTERACTIVE • Columbus, OH

Software Architect, 1998-2000

- ➔ **Chosen to develop and implement a web-based eCommerce solution.** Contributed to building a full eBusiness solution to enable client to market and sell new dietary supplements online, leveraging Java technology.

EXECUTIVE JET • Columbus, OH

Applications Architect / Consultant, 1997-1998

- ➔ **Selected to design a flight routing optimization system.** Delivered a web-based solution (leveraging Java and Corba) to enable the Customer Service Department to effectively schedule flights across fleet of jets.

DAIMLER BENZ AG • Stuttgart, Germany

Electronics Architecture & Networks Engineer, 1996-1997

- ➔ **Developed a real-time processing system** to validate newly developed Kalman Filter Engine Management Model. Assisted in designing hardware and software to simulate new engine management approach.

EDUCATION

THE OHIO STATE UNIVERSITY

Bachelor of Science (BS), Electrical Engineering

Udacity's Self-Driving Car Nanodegree Program, 2017

TECHNICAL KNOWLEDGE

Persistence • Hibernate • Toplink • C++ • J2EE Tomcat • Weblogic • Websphere • iPlanet Application Servers
Application Design / Architecture with Test Driven Development • System Administration Tools
JAVA (J2SE, JEE: EJB, Servlets, & JSP, Spring / MVC) • Struts / Spring MVC Framework