

Lori J. Williams

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SUMMARY

Solutions-oriented **Software Engineer** with 10 years industry experience, designing and developing code for new software and enhancing existing product capabilities. Contributed to relational database engine development, provided maintenance for prior releases, and recognized as "go-to" person for Statement Caching feature. Able to ramp up quickly to new environments and platforms. High interest in projects requiring complex algorithms.

Specialties

- * Software Design and Development including full development and software life cycle
- * Languages: SQL, PL/X, C/C++, Python, MVS Job Control Language (JCL)
- * 64 bit application experience
- * OS/environments: Windows XP, Mac OS X, VM, OS/390, z/OS, Eclipse, prior Linux and UNIX experience, some knowledge of cloud computing and MySQL
- * DB2 for z/OS (Statement Caching, Resource Limit Facility, Profile Monitoring), large-scale server-side applications and architecture

PROFESSIONAL EXPERIENCE

IBM, DB2, San Jose, CA

2000 - 2010

Staff Software Engineer (2004 - 2010)

Designer and developer for DB2 for z/OS and prior DB2 for OS/390 features and functionality releases v7 through v10.

- * Designed and implemented several Program Recovery Routines for handling abnormal thread/application termination to prevent DB2 from crashing. Restored environment (via releasing storage and latches) and tracked thread usage in a multi-thread environment and required precise scoping to avoid timing window errors.
- * Primary developer on Dynamic Statement Cache.
 - * Improved hashing algorithm to reduce collisions and data retrieval time.
 - * Reduced storage contention by designing compression frequency algorithm around fragmentation detection.
 - * Eliminated customer problems of residual thread data caused by timing windows through careful code path inspection, testing, and implementing solution.
 - * Redesigned algorithm for filtering and sorting cached SQL statements in IFCID 316 serviceability trace to use less processing time.
 - * Implemented algorithm for releasing cache storage during storage contention.
 - * Managed project to enable/disable Statement Caching without stopping DB2 (Online ZPARMS).
 - * Extended Resource Limit Facility (RLF) function to work inside Statement Caching.
 - * Created regression test cases using secondary IDs authorization when accessing cached statements.
 - * Prevented 3 hours of customer outage by identifying faulty systems in a 3-way data sharing environment and eliminating need to recycle 2 systems.
- * Primary developer on SQL DESCRIBE.
 - * Created regression test cases executing DESCRIBE SQL using various CCSIDs forcing output translation of column names, labels, and distinct types.
 - * Designed feature to externalize additional DESCRIBE data.
 - * Extended UNICODE CCSID data truncation support adding value for customers.
- * Converted ~100k lines of code from 32 to 64 bit processing.
- * Primary developer for Profile Monitor feature of Optimization Service Center (OSC): method of monitoring statements for normal execution and tracking exceptions based upon RLF, column cardinality, spikes in CPU use, and CPU use threshold.

- * Improved performance in stored procedures by improving data structure clean-up algorithm from n to log n.
- * Received customer compliments for swift response when quickly resolving urgent, high profile customer problems.
- * Wrote 5 test cases with a total of 165 members executed to extend CAST test regression buckets within one month in addition to existing workload, preventing function deadline creep.
- * Prioritized project commitments and schedules to achieve development and service release objectives leading to 0 target extensions for service release fixes, 0 errors in service release fixes, and 0 outstanding forward fits to development level in 2009.
- * Received achievement awards from multiple development feature owners for design and development contributions above and beyond department's code responsibility.
- * Mentored 6 employees and provided assistance to many others in several fields of knowledge, enhancing the professional vitality and productivity of coworkers.
- * Identified software patch delivery pain points and provided solutions to reduce delay.
- * Suggested informational website enhancements as department Service Advisory Team representative to increase tools accessibility for developers and improve customer satisfaction.

Software Engineer (2000 - 2004)

- * Employee Charitable Contribution Campaign (ECCC) Functional Coordinator for DB2's 329 members, driving monetary contributions in excess of goals, obtaining a 100% response rate and the highest large group participation rate in the lab's history at 76.3%.
- * Proactively grabbed defects to help distribute and relieve work load across development team.
- * Reduced code errors integrating into customer products by conducting team code reviews.
- * Coordinated activities with team members and interacted with other component development teams within DB2.
- * Commended by 4 managers as a "team player with a strong sense of urgency".
- * Successfully communicated problems and provided solutions to customer representatives.
- * Increased team productivity by mentoring 2 of a 9 member team.

EDUCATION

BS, Mathematics, University of Washington, Seattle, Washington
 BS, Chemistry, University of Washington, Seattle, Washington

AFFILIATIONS

WITI: Women in Technology International
 University of Washington Alumni Association

AWARDS

AI Statement of Accomplishment: completed the Advanced Track of Introduction to Artificial Intelligence with a score of 91.4%
 National Collegiate Mathematics Award