Sam Kumar

SENIOR QUALITY ASSURANCE LEAD - Data Migration, ETL Testing & Agile Project Management

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SKILLS

- **ETL, Big Data & Cloud Testing**: Hadoop, Spark SQL, Databricks, AWS S3, Azure Data Factory, Azure Databricks.
- **Database Management & Data Validation**: SQL, MSSQL, MySQL, Oracle, and PostgreSQL for data validation.
- **Web Services Testing**: Playwright for UI testing, SoapUI for web service testing, QTP for regression testing.
- **Test Management & Process Automation**: Jira, HPQC, and Test Manager for defect tracking, test case creation.
- **CI/CD & Automation Tools**: Jenkins, Git, Maven for integration, version control, and build automation.

WORK EXPERIENCE

Sr ETL QA Lead **November 2015 – Present**
TCS Canada *Ontario*

- Directed team of 15+ QA engineers, ensuring on-time delivery and high-quality outputs by refining ETL pipeline testing with Hadoop (Impala), Spark SQL, AWS S3, and data orchestration tools, boosting process efficiency by 30%.
- Executed end-to-end data migration validation from Hadoop to Azure, utilizing Python frameworks, Azure Factory pipelines, and containerized environments, achieving 99.9% accuracy post-migration and enhancing integration quality.
- Fostered cross-functional cooperation, guaranteeing seamless coordination between business stakeholders, data engineers, and developers, shortening execution timelines by 20% without compromising accuracy through Agile practices.
- Assessed comprehensive gap analysis and suitability assessments across diverse Lines of Business, identifying critical gaps resulting in an enhanced test plan framework with automated regression suites, increasing coverage by 40%.
- Conducted ETL and Big Data testing using Hadoop, Spark SQL, and AWS S3 for large-scale data transformation pipelines, incorporating schema validation, data lineage tracking, and parallel processing to enhance data reliability.
- Defined and implemented end-to-end QA strategies for cloud-based data engineering projects using Azure Data Factory, and custom Python automation tools, incorporating parameterization to reduce manual validation efforts by 30%.
- Created and liaised data validation and suitability analysis for LOBs in HPQC, aligning QA deliverables with business requirements and enhancing traceability and audit-readiness across testing phases using metadata-driven testing.
- Coordinated offshore QA teams using Jenkins and DevOps pipelines to streamline nightly builds, defect tracking, and reporting workflows. This initiative improved collaboration, increased productivity and defect resolution speed by 25%.
- Automated 200+ API regression tests using Postman, SoapUI, achieving a 35% reduction in manual testing effort while enhancing defect detection across microservices during data pipeline verification and cloud-based ETL testing cycles.
- Monitored SLA compliance using Azure Application Insights, proactively identifying and resolving 98% of potential breaches before escalation, leading to improved uptime and increased client satisfaction in large-scale cloud deployments.
- Designed and implemented metadata-driven test cases across 15+ Azure Data Factory pipelines, ensuring validation logic and reducing test maintenance by 40%, improving scalability of testing across cloud data ingestion flows.
- Collaborated with business teams to map data lineage and transformation logic for 25+ datasets, increasing data quality traceability and regulatory compliance for audit use-cases, reducing QA-to-business turnaround time.
- Developed custom Python-based validation scripts for Azure SQL Managed Instance operational logs, enabling proactive anomaly detection and improving log verification turnaround time by 40% during post-migration testing efforts.
- Managed quarterly QA audits and compliance reviews for cloud data pipelines, resulting in a 100% pass rate on internal controls and governance standards, while strengthening audit-readiness documentation across 20+ data assets.
- Automated 150+ ETL validation checkpoints using PySpark, increasing test coverage by 28% across Azure pipelines.

Sr QA Lead **October 2014 – November 2015**
Service Alberta *Alberta*

- Managed functional testing for the ALTA2 migration, developing over 200 test cases for mainframe and web systems, guaranteeing 100% alignment with business requirements and minimizing database discrepancies using SQL queries.
- Orchestrated end-to-end UAT testing across mobile and desktop platforms, including cross-browser testing for iOS and Android, improving application stability by 35% during the migration from legacy systems using Selenium WebDriver.
- Evaluated and verified data migration between ALTA and ALTA2, rectifying data inconsistencies, increasing synchronization accuracy by 25% and reducing downtime during transition using SQL scripts and data profiling tools.
- Analyzed functional and regression test results while tracking, managing defects using Jira. Collaborated with developers to resolve issues within 48 hours, which improved defect turnaround time, boosted release efficiency by 20%.
- Implemented Playwright-based automation framework for UI testing, reducing regression cycles by 40% while increasing script reusability and compatibility across major browsers including Chrome, Safari, and Edge for ALTA2 application.
- Spearheaded penetration and security testing of SPIN2 with IT security teams, identifying and mitigating 12+ critical vulnerabilities pre-deployment, boosting application compliance with provincial data protection regulations.
- Initiated cross-browser compatibility matrix for ALTA2 and SPIN2 applications, covering 10+ browser-device combinations, which led to a 25% drop in user-reported UI issues post-deployment by validating layout and accessibility.
- Introduced SQL-based data audit scripts for validating 50+ migration rules, cutting manual test effort by 30% and uncovering 15+ schema mismatches early in the QA cycle, ensuring a smooth transition from mainframe to web systems.

- Conducted performance benchmarking for ALTA2 across 3 environments using JMeter and system resource profiling tools, identifying memory leaks that led to a 15% improvement in application stability under concurrent user loads.
- Facilitated defect root cause analysis workshops with cross-functional teams, reducing recurring bugs by 30% and increasing test case precision by aligning functional gaps with ALTA2 workflow design improvements.
- Performed 75+ API validations across ALTA2 modules during regression cycles, reducing backend rework by 35%.

Sr QA Lead **May 2013 – October 2014**
Servus Credit Union *Alberta*

- Championed the validation of Loan Origination System applications across mixed channels, optimizing test coverage by 30%, ensuring seamless integration and improving the user experience using TestNG and Jenkins automation.
- Revamped functional and regression testing of LOS (Retail and Commercial), ensuring data consistency and system functionality, reducing defects by 25% through methodical test execution and issue resolution with Git version control.
- Arranged cross-platform testing of mobile applications (iPhone, Android, Windows) to ensure compatibility, decreasing integration issues by 15% and improving overall system stability across devices using Appium and Selenium.
- Supervised functional and integration testing of dealer applications including Filogix and Dealertrack, ensuring connectivity. This coordination minimized test execution delays and helped reduce the overall testing cycle time by 10%.
- Built reusable test automation scripts for LOS workflows using Playwright and TestNG, reducing test execution time by 45% and ensuring 100% compliance with release schedules across 3 product lines—Retail, Commercial, and Agricultural.
- Created interactive Tableau dashboards to visualize QA KPIs, bug trends, and test coverage, improving stakeholder visibility and reducing manual reporting time by 50%. Enabled real-time insights that helped prioritize defects.
- Built automated test repository integrated with Microsoft TFS and SharePoint, supporting 1000+ versioned test assets. Enabled full traceability and audit compliance across QA cycles, cutting documentation time by 35%.
- Streamlined LOS testing by automating API validations for Filogix and Dealertrack, enabling parallel testing across modules. This reduced dependency delays by 20% and accelerated regression cycles, improving delivery speed.
- Designed test data frameworks and access control validations for LOS modules, enhancing coverage by 35% and catching 7 permission bugs. Strengthened compliance during UAT and enabled earlier detection of access-related defects.
- Implemented automated smoke tests into CI/CD using Jenkins, Playwright, enabling daily validations and improving defect detection. This reduced rollback incidents by 40%, enhanced build stability, and ensured faster QA feedback.
- Created 40+ modular test scripts across LOS modules, cutting retesting cycles by 25% and enabling rapid validation.

Sr QA Lead **April 2012 – April 2013**
Sasktel Telecommunications *Saskatchewan*

- Represented UAT efforts for the Work Order System replacement, validating system integration across 10 interdependent systems, boosting testing throughput by 25% and minimizing deployment issues by 40% using CI/CD practices.
- Formulated over 300 test cases for Siebel CRM, Click Software, and SalesRequest, improving system integration accuracy and reducing post-release defects by 20% through effective test suite management in an Agile Scrum environment.
- Guided end-to-end testing for the Click Software suite, including integration and regression tests, ensuring 100% coverage for all system touchpoints and decreasing cycle time by 18% using performance testing tools and frameworks.
- Leveraged HP Quality Center to manage defect tracking, assign priorities, and monitor status updates in real time. This streamlined communication across QA and development teams, improved issue resolution efficiency by 20%.
- Conducted backend validation using DB2 and TOAD, improving data integrity for 5+ critical telecom workflows and reducing test data setup time by 20% through optimized query automation and data staging strategies.
- Coordinated defect triage sessions across 4 teams, resolving 90% of high-priority issues within 72 hours and improving first-time pass rate of UAT cycles from 78% to 93% through enhanced test case alignment with business logic.
- Automated mainframe validation processes for TRUST and SIMON systems using custom shell scripts, reducing manual data entry by 50% and ensuring faster feedback during daily build validations in legacy-to-modern system migration.
- Introduced a centralized defect triage dashboard using Quality Center, automating priority tags & updates. Reduced time-to-resolution by 22%, improved coordination through structured workflows aligned with Agile sprint review cycles.
- Developed a risk-based test prioritization matrix for 10+ integrated systems, aligning QA efforts with high-impact workflows. Reduced production defects by 25% over two release cycles by ensuring critical paths received top priority.
- Implemented a structured UAT sign-off workflow using SharePoint forms and automated email notifications. This accelerated approval turnaround by 50% and ensured audit traceability, while improving stakeholder accountability.
- Managed execution of 300+ test cases across 10 integrated systems in 18 days, ensuring 100% UAT completion.

EDUCATION

Masters in Networking January 2010 – January 2012
Centennial College, Toronto
Bachelors in Computer Science May 2005 – September 2009
JNTUH, India

CERTIFICATIONS

- **AZ-900: Microsoft Azure Fundamentals** – Microsoft
- **DP-300: Azure Database Administrator Associate** – Microsoft
- **Databricks Lakehouse Fundamentals** – Databricks Academy
- **Professional Scrum Master I (PSM I)** – Scrum.org