KAMAL KUMAR NATHA

Oshawa, Ontario, Canada | 647-949-8533 | kamal.natha@gmail.com | linkedin.com/in/kamalnath0303

Senior QA Automation Architect · Project Manager · AI-Powered Testing Leader

QA Automation Architect and Senior Project Manager with 21+ years of enterprise delivery across banking, capital markets, retail, and e-commerce, including 7+ years of hands-on SQL (Oracle, PostgreSQL) and data pipeline/ETL-ELT testing, and Databricks experience supporting data engineering workflows. Recognised for pioneering AI-powered testing and prompt engineering — using GitHub Copilot, ChatGPT, and Claude for test generation, data validation rule generation, and ML-based defect prediction to accelerate delivery and maximise coverage. Delivered 21+ programs valued at $10M+, led teams of 50+ engineers, and consistently achieved 98%+ on-time deployment across Agile and SAFe models.

KEY ACHIEVEMENTS

- 45% fewer production defects via QA governance, risk-based testing, and shift-left automation across 5+ enterprise programmes.
- 40% faster release cycles by architecting CI/CD-integrated automation pipelines across UI, API, and data layers.
- 60% reduction in test authoring effort using AI tools (GitHub Copilot, ChatGPT, Claude) to auto-generate test cases from stories and API specs.
- $10M+ portfolio, 98%+ on-time delivery across 21 enterprise transformation programmes in banking, retail, insurance, and travel.
- 50+ engineers mentored in automation architecture, DevOps, and AI-assisted quality practices across global teams.

PROFESSIONAL EXPERIENCE

CIBC — Senior Test Automation Architect (Contract) **12/2025 – Present**
Capital Markets Toronto, Canada

- Architected and led implementation of scalable test automation frameworks using Playwright and WebdriverIO (WDIO) with TypeScript and Python, supporting capital markets trading and settlement applications.
- Designed modular, reusable framework architecture (page object model / hybrid design) enabling teams to scale automation across multiple capital markets platforms with minimal duplication.
- Achieved 100% test coverage across critical capital markets workflows by driving automation-first testing practices and rigorous framework governance.
- Pioneered adoption of AI-driven testing using GitHub Copilot, accelerating test script authoring, reducing boilerplate code, and improving developer/QA productivity.
- Integrated AI-assisted test generation and code suggestions into daily workflows, cutting test development time and improving consistency across the automation suite.
- Led framework implementation end-to-end — from architecture design to CI/CD integration — ensuring fast, reliable feedback loops for trading and risk systems.
- Leveraged Databricks to support data pipeline validation and quality checks for capital markets datasets, bridging automation testing with data engineering workflows.
- Applied prompt engineering with GitHub Copilot and ChatGPT to auto-generate data validation rules and test logic, reducing manual rule-authoring effort for trading data workflows.
- Mentored engineering and QA teams on Playwright/WDIO best practices, TypeScript/Python coding standards, and effective use of AI coding assistants.
- Partnered with developers, business analysts, and risk/compliance stakeholders to align test strategy with capital markets regulatory and performance requirements.

Cognizant — Senior Test Automation Lead **06/2007 – 07/2025**
Toronto, Ontario

Client: Loblaw, Canada & Chewy, USA

- Leading automation across mobile and web platforms, overseeing project planning, risk mitigation, and stakeholder communication.
- Implemented enterprise-level QA governance frameworks and automation strategy, reducing production defects by 45%.
- Automated 500+ API test cases, cutting manual testing by 65%.
- Integrated CI/CD pipelines with Jenkins and GitLab, improving release timelines by 30%.
- Conducted technical audits and training, enhancing team performance and quality standards.
- Worked with IBM MQ and Google Pub-Sub to validate messages from upstream to downstream applications.
- Migrated Oracle Database to Cloud PostgreSQL using Qlik, moving workloads from on-prem to cloud.
- Authored and reviewed complex SQL queries across Oracle and PostgreSQL databases for data validation, quality checks, and ETL/ELT pipeline testing, drawing on 7+ years of hands-on SQL experience.
- Applied prompt engineering techniques (GitHub Copilot, ChatGPT) to auto-generate data validation rules and test datasets for Chewy's e-commerce data pipelines, cutting manual rule-authoring time.

Senior Automation Lead (Technology CoE) **Toronto, Ontario**

Client: Loblaw

- Managed full automation and QA programs for enterprise clients, ensuring on-time, high-quality releases.
- Implemented and customized the Service-Oriented Test Architecture and Data-Driven Framework as required, analyzing business requirements and large data volumes to fit into the SOA test framework so business flow could be validated smoothly for the micro-strategy report.
- Designed and implemented service-oriented automation frameworks, boosting test accuracy and speed.
- Facilitated Agile program delivery, leading cross-functional collaboration across DevOps and QA teams.
- Spearheaded test data management and automation strategies for ETL and big data pipelines.
- Accelerated CI/CD release cycles and improved governance compliance.

Senior Associate (Technology CoE) / Automation

Client: Loblaw, Canada – Test Automation Architect/Lead; Freddie Mac, USA – Test Automation Architect/Lead; Northern Trust Bank, USA – Test Automation Architect/Lead; Walmart, USA – Test Automation Architect/Lead; Liberty Mutual, USA – Test Automation Architect/Lead; Bank of New York Mellon, USA – Test Automation Project Lead

- Customized automation frameworks using Selenium and UFT, improving test precision by 35%.
- Reduced post-release defects by 30% through QA governance and vendor collaboration.
- Delivered reporting solutions that enhanced visibility and project decision-making by 30%.
- Managed risk mitigation and continuous improvement initiatives across QA operations.

Associate (Technology CoE) / Automation **Kolkata, India**

Client: Bank of New York Mellon, USA – Test Automation Developer; Wyndham Worldwide Hotel Group, USA – Automation Team Lead; Galileo International, USA – Automation Developer

- Developed and maintained automation scripts, increasing test coverage by 40%.
- Streamlined regression and performance testing frameworks for enterprise systems.
- Collaborated with global teams to ensure consistent and timely QA delivery.

NIIT Technologies — Senior Software Engineer **10/2004 – 06/2007**
London, UK

Client: British Airways, UK – Automation Developer

- Delivered enterprise testing solutions, improving product quality by 30%.

- Managed full testing lifecycle from requirements to release.
- Established automated regression suites that increased accuracy and reduced rework.

EDUCATION

Master of Computer Applications — Utkal University Bhubaneswar, India
Bachelor of Science: Chemistry — Nayagarh College Nayagarh, India

CERTIFICATIONS

Certified Data Science & Machine Learning — Harvard **01/2021**
AWS Solutions Architect – Associate **01/2020**
ISTQB Foundation Level — ISEB, UK
Project Management — Brainbench / QAI Global
HP Certified Professional — UFT/QTP 9.2, QC 9.2

PUBLICATIONS

Beyond Automation: The Future of Testing in the Age of AI
Practical guide covering enterprise automation strategy, CI/CD integration, QA governance, and AI-driven testing.

Mastering Test Automation Frameworks
Handbook on building scalable UI, API, and integration automation frameworks using modern DevOps practices.

SKILLS

Agile & Scrum Project Delivery, SAFe & Kanban, Automation Framework Design & Implementation, API & UI Test Automation, Automation Tools: Selenium, Playwright, WebdriverIO, Appium, UFT/QTP, Data & Pipeline Testing: SQL (Oracle, PostgreSQL), ETL/ELT Validation, Databricks, Data Quality Rule Generation, Cloud Platforms: AWS, GCP, Azure, DevOps & CI/CD Pipeline Integration: Jenkins, GitHub Actions, GitLab, Azure DevOps, Docker, Infrastructure as Code: Terraform, Ansible, AI-Powered Testing: GitHub Copilot, ChatGPT/Claude Test Generation, Prompt Engineering, Applitools, Testim, Intelligent Test Selection, Data Science & Predictive Analytics, Performance & Load Testing (JMeter), Process Optimization & Continuous Improvement, Programming: Java, Python, JavaScript, TypeScript, C#, Project Lifecycle Management, QA Governance & Quality Assurance Strategy, Risk Assessment & Mitigation, Stakeholder Engagement & Communication, Test Data Management (TDM)