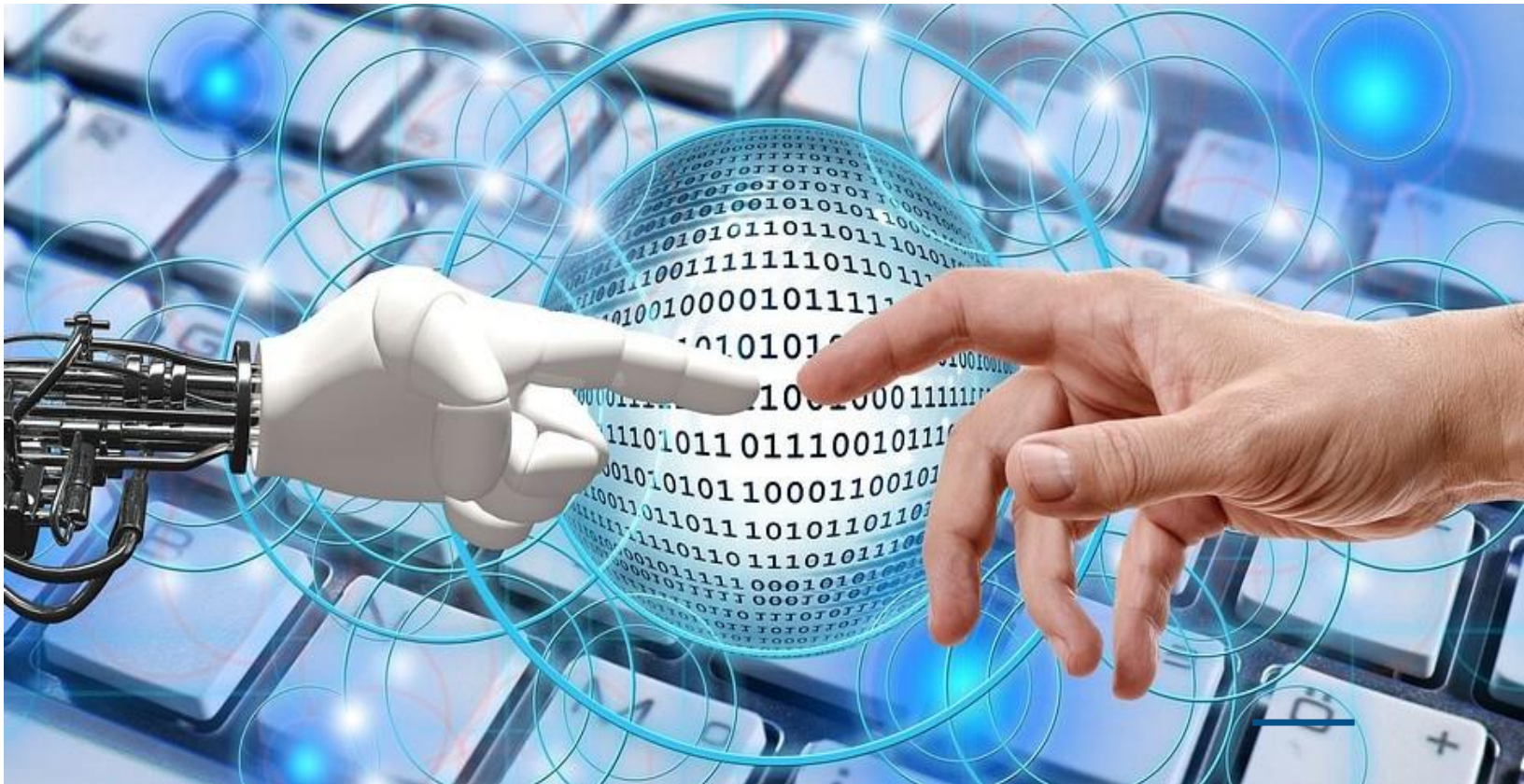


INTERRA PLUS

Quality matters. Trust us, we know and we can help.



Testing Services and Innovation

Asoke K Laha, Founder, President & CEO InterraiT Inc.



“With technology moving at an incredible pace and delivery time spans narrowing down, meeting deadlines where the bar is always set higher, the only real solution is to test faster”

WHAT'S INSIDE THIS ISSUE?

Testing Services and innovations	- 1
How can AI help in Testing?	- 2
InterraiT partners with AutonomIQ	- 3
Autonomous Testing is not Automation	- 4
QA Trends in Testing	- 5
Test Automation for a cloud based market place	- 6
Tech Talk	- 7
How InterraiT Can Help	- 8
How we are paving towards Brighter Future	- 9

How can AI help in TESTING?

Testing is termed as a planned process where the application is analyzed and accessed under certain conditions to understand the risk involved in its implementation. It is a vital practice that assures customer satisfaction within an application and helps in safeguarding against potential failures that may prove to be detrimental down the line. But with software development life cycles becoming more complex by the day and the reduction of delivery times, there is no other choice than to test smarter.


Today, the key to streamlined software testing that is both smart and efficient is Artificial Intelligence. With Artificial Intelligence, the traditional route of manual testing has progressively moved forward towards an automated and precision based continuous testing process. Using automation testing, the overall depth and scope of tests has increased resulting in an overall improvement of software quality.

With the amalgamation of AI in test creation, execution and data analysis, testers can now permanently do away with the need to update test cases manually and continually. By automated testing, testers can now execute a controlled form of testing for over thousands of users that interact with a network, software or a web based application. With AI powered testing even the software testing timespan has reduced from days to mere hours that translates directly into cost savings.

It is nevertheless clear that with such enormous concentration and interests for an amazing, and high grade products, software testing has turned out to be something other than just a requirement that has pushed the IT companies towards dispensing a greater part of the IT financial plan for software testing and QA budget to stay ahead in this transformative and time constraint environment.



"InterrailT demonstrated considerable creativity, ingenuity and technical prowess in QA and Test Automation for our Cloud based healthcare app that collects and manages data from IoT devices, wearables, Hospitals and Patient App. InterrailT's QE team created an elaborate test strategy, detailed technical testing design specs, and exhaustive test cases. Their test execution reports ensured our development teams stayed on top of issues, and their flawless execution provided superior quality deliverables on time and within budget. Moreover, I have always found them to be very responsive, flexible and proactive in their approach to partnering with me and my organization to deliver value."



InterraIT and AutonomIQ Announce Partnership to Deliver New AI Solutions for Test Automation and NextGen Digital Experiences

AutonomIQ, a cloud platform that uses AI and machine learning for autonomous testing, is partnering with leading systems integrator, InterraIT, to bring autonomous testing solutions to market for large public and private clients. Partnering with leading SI's pairs AutonomIQ's Autonomous Testing Platform with world class delivery expertise, global enterprises will be able to realize value from their digital initiatives much faster, with much higher quality.

"The burgeoning AI disruptions can be difficult to navigate as the vendor landscape raises across the industries and applications," said Asoke K. Laha, Founder & CEO InterraIT Inc. "With decades of experience, InterraIT is well positioned to lead the way in helping businesses make smarter decisions through the adoption of AI tools, and our partnership with AutonomIQ only enhances this".

"InterraIT has a strategic focus on extreme automation and AI in development, testing, business process and infrastructure and cloud and security space," says Ranjan Guha, President of InterraIT's North America Operations, "Robotic test Automation with AutonomIQ plays right into our sweet spot to provide our customers faster time to market solutions and services."

Today, enterprises must spend hours writing and maintaining test scripts, keeping them from realizing the true value of continuous testing. Using AI and Machine Learning to create and maintain testing assets, allows enterprises to realize the full benefit of autonomous testing at scale.

"Global enterprise rely on systems integrators as their trusted partner to deliver innovative solutions that solve business problems," says Ram Shanmugam, Co-Founder and CEO of AutonomIQ. "By adding Autonomous Testing to their tool belt, our partners will be able to deliver solutions much faster, with much higher quality.

About AutonomIQ

AutonomIQ is a cloud platform that enables product and IT teams to autonomously test, release and deploy software, thereby increasing velocity of software releases without compromising quality. With pre-built integrations to common web applications and SaaS providers, customers can instantly create test cases, generate test scripts and test data, and execute tests. Using deep-learning and AI algorithms, AutonomIQ detects changes, enables self-healing for test assets and provides advanced diagnostics. In real world situations, AutonomIQ has been shown to provide over ~50% improvement in speed and quality compared to existing tools and techniques.

About InterraIT

InterraIT has been a leader in the Information Technology Industry since its founding in 1996. The company is a Global Software Services organization that delivers innovative business and technology solutions to Fortune 1000 companies. Headquartered in California, InterraIT's operations are spread across 5 countries, with a sales network spanning the United States, Canada, Netherlands, Germany and India. The company has three state of the art development centers in India, which are the focal point in servicing its esteemed customer base across the globe.

"The burgeoning AI disruptions can be difficult to navigate as the vendor landscape raises across the industries and applications" said Asoke K. Laha, Founder & CEO InterraIT Inc.



Autonomous Testing is Not Automation

By Raj Rao, Co-Founder AutonomIQ

It's Time to Graduate from Automation to Autonomous Software Testing.

Automation is relatively easy for me as an engineer. I start with a manual task and then I figure out how to remove the human element.

Forty years ago I might have been writing this blog as a news article, using a pen and paper, or a typewriter. When I had finished my article, I had someone check it for spelling and grammar. The process of publishing my article involved typesetting, a printing press and distribution by trucks to people's houses and places of business. Now that process is entirely automated. Many of the manual, time-consuming steps of publishing have been eliminated.

In the world of software development, the same distinction exists. What we are seeing are a multitude of software testing tools which automate software testing tasks. In our space, everyone does automated testing already.

But no one, to our knowledge, has created autonomous testing. The difference between autonomous and automation is in the degree of independence. An autonomous vehicle, by comparison, is a holistic, integrated system of automation which operates the majority of its functions independently from a driver. The amount of data and systems involved for autonomy is vastly greater than the data needed for automation. Powered by artificial intelligence, autonomous software testing has more in common with the self-driving vehicle. It aggregates the data that it learns from the tasks that it performs, and uses that to test the next software application faster and more meticulously. It says, in effect, "I've seen this situation previously, and I know exactly what to test, where to test and most importantly, where not to test."

Your software quality and testing speed will not necessarily improve with isolated elements of automation, especially if they have to be initiated or controlled by human intervention, manual steps which are prone to error, forgetfulness or fatigue.

Autonomous testing restores agility by connecting tools and restoring end-to-end test execution. Test cases are paired with analytics and correlation results. IT can now keep up with rapidly changing requirements across entire application landscape.

Here are several key elements in the software development life cycle that can be run independently by a self-learning, autonomous testing system:

- Application awareness
- Test script generation
- Test data generation
- Self-correcting tests through continuous deep-learning
- Impact analysis for smarter regression testing

The self-learning autonomous system covers the life cycle of test script generation, dynamic data generation and continuous test execution. Tests are run as frequently as needed to match the pace of development. Test scripts are created and maintained from plain English test suites without ever writing code. Defects are pushed to CI/CD tools for resolution.

As you consider the automation of software testing, make sure you are investing in an independent, end-to-end autonomous system that covers the entire software development life cycle (a self-driving car) versus an automated module that only addresses a single task (automatic transmission) and doesn't learn anything from the test.

The difference between autonomous and automation is in the degree of INDEPENDENCE.



“Automation is not just a concept, it’s a key to SUCCESS.”

Top 5 QA Testing Trends of 2019

These days, we are witnessing massive technological advancements as the world is becoming more digitalized. This year is no exception, thus forcing organizations to continuously innovate to stay ahead of the curve.

With this, it is anticipated that DevOps, artificial intelligence for testing, and API test automation, security testing and open source tools are going to some of the most noticeable trends in 2019.

- **Increasing Use of AI-Based Testing Solutions**

One of the most exciting areas of Quality Assurance (QA) is the impact of Artificial Intelligence and Machine Learning today. Since tasks that fall under QA tend to be repetitive, there is great scope for AI.

Furthermore, even machine learning is making strides in testing and software development process, especially with predictive analytics, log analytics, requirements traceability matrices, and defect analytics. There is even more to see with its application when it comes to addressing problems such as quality prediction, test case prioritization, fault classification, and assignment in the upcoming years.

- **API and Micro Services Test Automation**

Decoupling the client and server is a current trend in designing both Web and mobile applications. These changes require teams to test the APIs and services independent of the applications using them. This has led to increase in the adoption of API and service test automation for testing products.

- **Growing Adoption of Open Source Tools**

Open source tools are considered beneficial for business and are going to play a vital role in the future. Other than the cost, there are many advantages of using open source tools, as it is a free to use, easily customizable and is open for the public. Furthermore, it provides the freedom of design and integration of powerful test automation that makes open source tools widely accepted for the future.

- **Accelerating Adaption of DevOps in Software Testing**

DevOps has gained much interest over the past five years and will continue to intensify in the coming years. It is a widely accepted solution for organizations that are looking at ways to shorten the software lifecycles from development to delivery and operations. Due to its prominence in integration and automation, organizations are likely to adapt DevOps in the near future.

- **Escalating Demand of Security Testing**

With the impact of digitization, every organization is developing their own application to run their operations more effectively. This has made them more prone to cyber breaches. To avert these type of risks, an increasing number of organizations will turn to security testing. We live in the world of unprecedented exponential changes that is driven by technology.

To stay ahead of the curve, organizations need to keep up with these trends in order to not only deliver a high quality product that fulfills the client’s expectations, but to also enhance to overall customer experience.



Test Automation for a Cloud based Marketplace Application

We, at InterraIT with our advanced competencies in testing, help customers mitigate problems associated with this specialized branch of software engineering.

Our client is a mobile application service provider for individuals to aggregate, organize, and share medical records. It faced an immense challenge of keeping track of its medical records which were kept in different places and not in a unified format.

We served the client with a top quality cloud based web and mobile app that made job of organizing this information easier, and with accuracy. It collects and manages data from a number of sources, including smart devices, lab reports, and doctor/hospital visits.

With wide expertise in varied tools & technologies such as Postman, Grafana, Zap, Xamarin, Owasp, and Swagger, our test solutions included:

- Extensive API Automation to test various combinations and integrated build triggers to provide quick feedback about build quality.
- End to End UI Automation using Appium.
- Performance Testing using JMeter.
- Automation triggered through Jenkins build job.
- Test artifacts and collaboration with stakeholders using test management tool Jira.
- ITAF (In house Test Automation Framework) enabled continuous integration & deployment.

At InterraIT, we take great pride that our test solutions led to several business benefits such as automation of all regression cases, NIL defect leakage and reduced regression time by 90%, and cost reduction by 70%.

To know more, please visit our [Quality Assurance & Testing Services](#).

"What a fantastic accomplishment you guys put together for us for the loyalty kiosk application. As I have mentioned before, you guys simply amaze me with your talent, dedication, and work ethic. It is very rare to find such a team that can accomplish great things time and time again...even in the face of tough adversity. I appreciate that you guys are always there and can always be counted on."

Director – IT, Retail Chain in USA (a Fortune 500 Company)



Test Automation - Tech Talk

Aalok Payal, Automation Head, InterralT Inc.



"Automation is not just about reducing regression time, a well thought automation strategy is a key to success that free up the entire QA team to critical thinking about the new features without worrying about the existing ones."

In today's digital transforming world, the software industry is undergoing major disruptions that has led to the development of new testing methods. The main motive behind automation of a software testing process is to culminate manual testing on every new release. It is basically the automation of a bunch of manual processes. Similar to manual testing, automation testing is also used to test the application from load, performance and stress point of view. The main goal of automation testing is to increase the efficiency and develop software accuracy. It is widely accepted as it is very cost effective, requires less resources, and saves overall project time.

An organization can apply automation testing to boost the efficiency of the QA team. Some benefits include higher accuracy, better reporting capabilities, coverage, resource efficiency, bug detection, and reusability. The approach best fits in with CI/CD environment and continuous delivery software development practices.

Software Test automation makes use of dedicated tools to control the execution of tests that compares the actual results against the expected results. The main purpose of automation testing is to carry out regression testing as regression testing is repetitive. Testing tools not only help testers to perform regression tests but also helps them to automate data set -up generation, product installation, GUI interaction, defect logging, etc. Furthermore, Automation tools are used for both Functional and Non Functional testing.

The software testing is a dynamic domain with volatile trends at a deafening pace. Every passing day brings transformative new opportunities for testers as well as for business to leverage game changing testing solutions.

To stay ahead of the curve, the quality assurance professionals have to rapidly adapt the changes in the software industry to stay relevant. Know more at:

[Tech Talk Episode 1](#)

"The only way to be immune to the disruption in the software industry is to prepare for the future."

About InterraIT- How can we help?

InterraIT's test solutions empower organization to reach the market at a faster rate at a reduced cost.

Our proven advanced turnkey solutions help both large and small organizations enhance performance and perform faster with new software endeavors.

- InterraIT offers specialized software testing services to provide custom solutions since the last 20 years to achieve functional as well as non-functional validation for digital products.
- We offer deep expertise in the areas of test automation, mobile QA transformation, cloud testing, UX/UI testing, and performance testing.
- We have our own test automation framework –ITAF.
- Our engagement ensures 100% transparency, high quality, and reliability.

- We are accredited as ISO 9001-2015 SEI-CMM level certified organization that provides business and technology solutions.
- We provide Try-before-you-buy Quality and Test Automation Service.
- Our Flexible, pay-as-you-use Infrastructure model allows scaling up/down resources based on immediate testing needs.
- We deliver focus driven, result oriented, "3R" approach based framework for testing to reach target customers.
- Our no obligation to services offers customized POCs that eliminate risks and buyer's remorse.
- Our solutions helps organizations to increase their product quality at an extremely low TCO that includes NO licensing cost and no CAPEX.

InterraIT's Quality Assurance and Testing Services offer reduced business IT risk, decreased overall cost of testing, and faster go-to-market capabilities.





How are we paving the way towards a BRIGHTER FUTURE?



DevOps QA Testing

In 2019, InterralIT will focus more towards agile and DevOps methodology to meet the continuous demands for new and improved IT solutions by end users.



API Testing

With extensive domain knowledge and usable information on API testing, InterralIT will focus more on propelling the growth in API testing capabilities.



Automation Testing

With the help of our experienced team and great proficiency in automation testing, InterralIT will focus more on leveraging test automation on both functional and non-functional side.



Performance Engineering

With experienced performance test engineer, our focus will now turn towards performance engineering, which means that we will not only identify bottlenecks but also prototype the solutions towards performance issues.



Futuristic Development

In 2019, with our focused R&D team we strategize to provide value added solutions that will enable us to bring innovations to our clients everywhere.



Focused R&D Team

We believe in keeping up with the standards of the industry and taking one step ahead in adopting the most trending technologies like AI, IoT, Big Data, and Cloud computing to enhance our customer experience.

“Connect with us to recognize your gaps, and promote innovation through entrepreneurial thinking.”



www.interrait.com/quality

business@interrait.com

2099 Gateway Place, Suite 200

San Jose, CA – 95110

Tel +1 408 451 1700

Fax +1 408 441 7495