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Exciting QA and Software Testing Trends to Watch for this Year(2021)!

White Paper

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I can't believe 2020 is finally at an end. This year has made most of the world change from our normal work environments and methods. Little to no in-person interaction. Forcing us to use only video calls for meetings. I don't know about you but synergizing over a video conference call is a lot different than face-to-face meetings.

Hopefully 2021 will bring back the good ole days of being in the office, where you can just walk to someone's cubicle or office to bounce around ideas:

The biggest change I see coming in 2021 is the end of an era for a browser that has been around since the beginning. Internet Explorer (IE) is at its End of Life. Mark the date August 17th, 2021, IE will no longer be supported by Microsoft. What will this mean for tools that operate solely on IE, like Micro Focus' ALM (Application Lifecycle Management) solutions? We shall wait and see…

Trends to look out for in 2021:

- **Artificial intelligence (AI) and Machine Learning (ML)**
  In addition to sorting out test loads, AI-powered testing applications can optimize test suites by detecting redundant test cases and ensuring optimal test coverage by analyzing keywords from a Requirements Traceability Matrix (RTM).
  Although ML in software testing is, for now, an exciting opportunity rather than a widely applied practice, in the future we can expect analytics-related initiatives to gain traction in identifying potentially problematic areas to cover with tests.
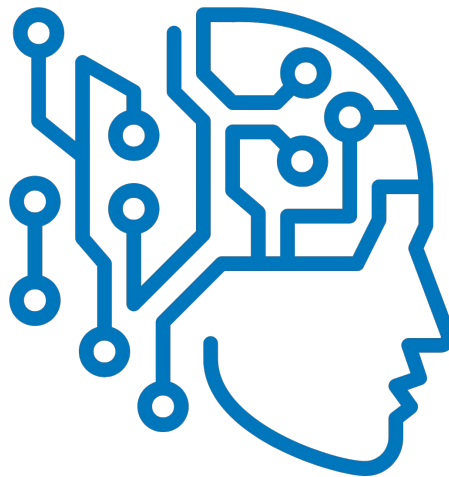
- **QA automation remains paramount**
  Despite the lack of automated tools for developers and qualified QA engineers, automation has become a vital part of the testing life cycle.
  QA automation empowers QA engineers to achieve the desired test frequency (the earlier, the more often, the better) and quality checks on every stage of the software development life cycle (SDLC).

- **Agile and DevOps**
  Digital transformation with a focus on customer experience-driven QA preserves its place in expected software testing trends for 2021.
  DevOps methodology erases the boundaries between testing, development, and operations to increase deployment speed, cut time to market, and promote higher ROI.

- **Security matters**

  With the technology industry moving at breakneck speed, the amount of information keeps on growing, making security testing a top priority for companies that care about optimizing data flow and preventing leaks, code errors, and holes.

  In particular, a study called 'Better Security And Business Outcomes With Security Performance Management' by BitSight showed that 82 percent of stakeholders agreed that the way their customers and partners perceive security is increasingly important to the way their organizations make decisions.


- **Performance engineering**

  In response to this tendency, software providers have started reconsidering their priorities in favor of a user-focused approach to quality on each stage of the SDLC — primarily to solve and prevent possible performance issues at the very beginning of the product's life cycle.

  Being more of a culture rather than a set of practices, performance engineering expects teams to move past simply running checkbox test scripts to studying each part of the system, including business value and customers.

  Consequently, performance testing objectives, such as speed, scalability, and stability of the application under different circumstances, have transformed into analyzing the system's inadequate performance and understanding where it is rooted in the development process.

  Since the number of platforms on which your app is available defines the captured market share, user experience carries more and more weight and becomes the driver for rapidly changing requirements, more frequent releases, and shorter development cycles.

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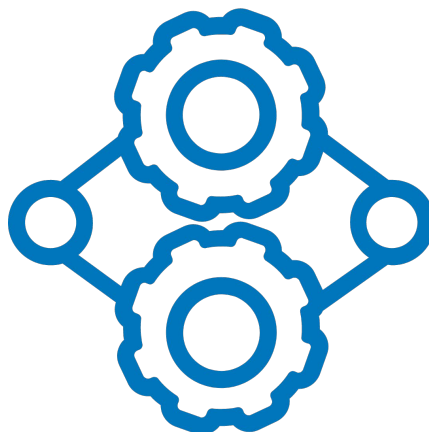
- **IoT and Big Data testing**

  Big data testing positively impacts organizations' ability to validate information, make data-driven decisions, and improve market targeting and strategizing.

  For now, organizations are a little behind the curve — only 41 percent have a fairly mature IoT testing strategy in place, while 30 percent of respondents intend to put IoT functionality into their products. The same goes for big data.

  Since the combinations to be tested between devices, platforms, protocols, and operating systems are innumerable, the QA market will experience a rise in demand for security, compatibility, performance, and usability testing.
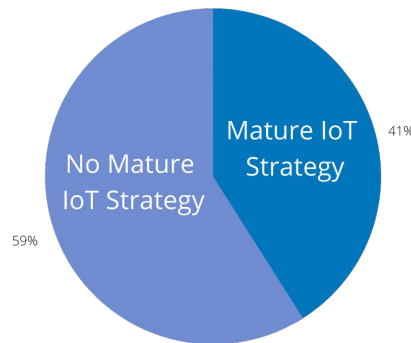
  Enterprise processes are becoming more complicated each year, so the need for big data testing won't be going anywhere in 2021.

  Another thing that makes big data testing an increasingly common practice is the fact that data is the new king for building marketing strategies.

  The rise of IoT-enabled applications has paved the way for more diverse data volumes being generated and accumulated by such projects, for instance, e-commerce giants like Amazon.

- **Blockchain testing**

  More and more enterprises across the globe, such as financial and automotive service providers, are continuously facing the need for platforms to communicate and store heaps of information securely, and blockchain-powered solutions seem to be a great fit.

  Blockchain tech challenges organizations with high adoption costs, legacy system integration inconsistencies, and privacy and compliance issues, to name a few.

  The intricate process of transaction involves steps like validation, encryption, decryption, and transmission — and a single hitch can cause the system to stop working.

I hope you found this article enlightening. Please feel free to email us and share your thoughts. 2021 is going to be an exciting year.

Happy New Year!!

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