CASE STUDY

Public Health Agency comprehensively tests mobile applications at lightning speed

A European public health agency was scrambling to open up their country as the COVID pandemic waned. The new mandate it was tasked with enforcing was to allow travelers to visit under the stipulation that they follow a 14-day quarantine upon arrival. In response, it developed a Covid Visitor Tracking mobile application for visitors to use.

However, the fluid nature of the Covid testing and tracking requirements meant that the application required daily changes, which led to a seemingly insurmountable testing challenge. If the daily changes in the application's characteristics couldn't be accurately tested and reported upon, it would generate false positives and create chaos with visitors, damaging the country's reputation and harming its economy.

Further, if the testing couldn't keep pace with the daily change cycle, it would be an impediment to adoption and/or turn the application into a False Positive generator.

Objectives

The agency needed to quickly implement a robust testing regime that could comprehensively test their new mobile application, notwithstanding daily changes to its functionality. That testing had to encompass full coverage for both functional and performance testing. Of equal importance was the speed and efficiency with which the testing had to occur. In short, it couldn't slow down the daily release cycle, nor could it be solved with manual testing, as that would be too slow even if enough manual testers were available.

Quick Facts

Industry
Government/Public Health

Geographies
Europe

Applications Under Test
iOs and Android apps

The AIQ Solution

The solution to this urgent public health challenge lay with Appvance IQ and its patented AI-driven testing.

In just two days, an Appvance professional services team trained AIQ's AI to test the Covid Visitor Tracking application, yielding over 800 unique tests, more than 50 times the number of manual tests executed prior. A week later, following more machine learning, the test count rose to over 3,000 unique flows through the application that were being functionally, API, and performance tested.

The rapid development and rigorous testing were so successful that the agency's former Covid team is now tasked with numerous "lightning projects". Every one is mobile-only and deploys to iOS and Android platforms.

Vital to these projects is fast design, quick implementation, and zero delivered defects. User adoption must be high and public reception positive. Thorough testing is critical and must be automated so that the brisk dev iterations can be comprehensively and automatically tested. In this high-velocity software delivery mode, tests must be resilient and continue to execute with no maintenance. New tests must be written in minutes by automation engineers who are domain experts.

This is made possible by AIQ's Mobile Designer with its built-in AI-assistance, an advanced Record and Playback technology for native mobile applications. It fully supports both iOS and Android applications, and no programming skills are required.

Whether the application is running in a device cloud, on an emulator or a real device, the experience is the same. With just an hour's training the agency's test team were writing complex and detailed tests against the application.

AIQ's Mobile Designer allows tests to be written quickly, have the resilience to continue testing when a UI has changed, and even rewrite the scripts automatically when UI changes mean the scripts finally need to be updated. The AI inspects the UI and automatically selects the most reliable accessors and chooses several backup ones too, so-called "fallback accessors". For highly dynamic UI's, it uses the actual image of the element on the screen.

This new, powerful test automation technology enables the agency's test teams to keep pace with their development counterparts and deliver dense test coverage on the critical user flows in any application. That means that there is no compromising quality even at this incredible innovation velocity.

Key Results

99% reduction in manual labor for mobile app functional, performance and API testing

185X increase in the number of tests per app

High velocity testing doesn't impede the rapid release of app changes.

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To learn more about AIQ please email us at info@appvance.ai