Tell Us About You!

https://www.menti.com/5dns3v19mf

Test JS Summit

Intro To

JS Functional Testing at Scale

Nikolay Advolodkin

Sr Solutions Architect @saucelabs

ultimateqa.com

@nikolay_a00

Christian Bromann

Open Source Program Office @saucelabs

@christian-bromann

@bromann

Agenda

1. **Introduction**
   Small presentation on browser automation

2. **Test Suite Setup**
   Setup of your test suite with WebdriverIO

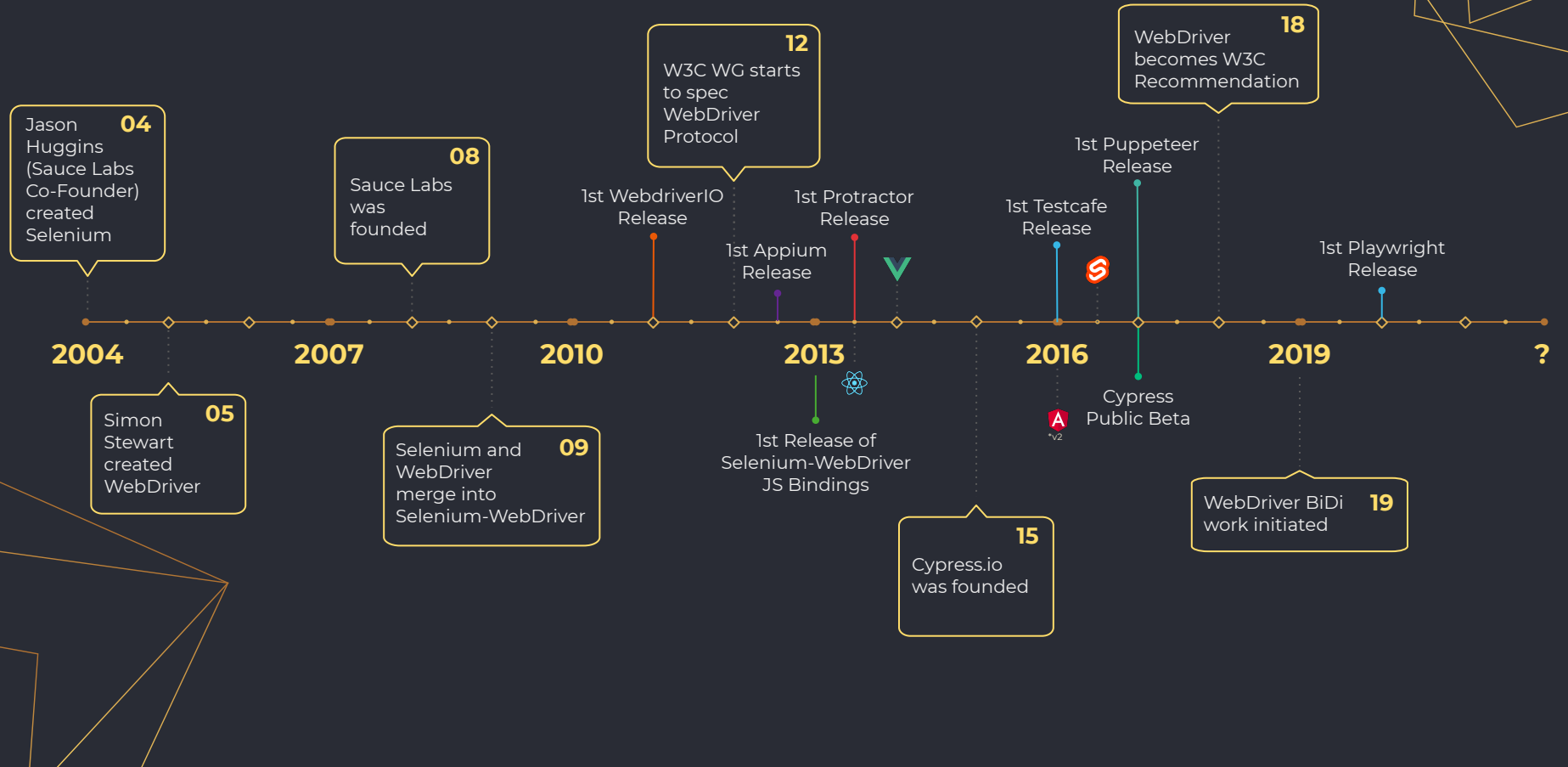
3. **Reporters and Services**
   Add reporters and services to your test suite

4. **Network Mocking**
   Simplify your tests by mocking network responses

5. **CI/CD Integration**
   Run your setup in CI/CD and scale it up with Sauce Labs

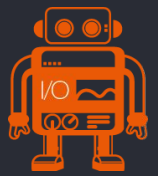
6. **VIsual + Performance**
   Add more test flavors with visual e2e as well as performance tests

WHAT HAPPENED PREVIOUSLY...



Types of Tools

Conventional



Non-Standard

AUTOMATION STRATEGIES

Cypress.io

Through JS + browser APIs

Puppeteer

Through browser APIs

Selenium

Through the WebDriver protocol

Testcafe

Through JavaScript APIs

Playwright

Through custom / modified browser APIs

WebdriverIO

Through WebDriver & browser APIs

WAYS TO AUTOMATE A BROWSER

JavaScript APIs

- 1st generation of automating (initially used by Selenium in 2004)
- Provides full control of the execution environment
- Automation commands are mostly emulated
- Comes with limitations, e.g. no switching windows or cross origin iFrame support

Browser APIs

- 2nd generation of automating browsers
- Available in all browser engines (Chromium/Gecko and WebKit)
- Accessible only in Chromium and Firefox
- Also used for debugging purposes (e.g. Chrome DevTools)

WebDriver Protocol

- 3rd generation of automating browsers
- Official Web Standard developed at W3C in a common effort by all browser vendors
- Thoroughly tested as part of the web platform test suite
- Limited capabilities - originally designed to automate from the user POV

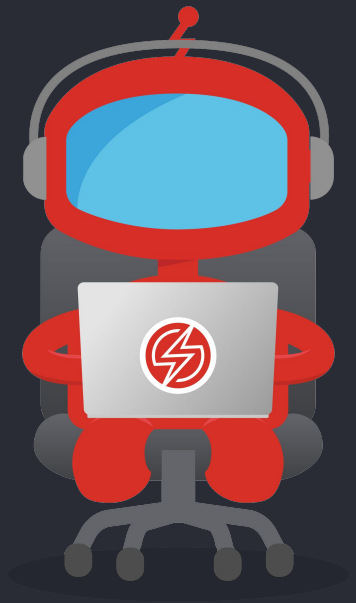
Sauce Testrunner Toolkit

Sauce Testrunner Toolkit is a solution that expands Sauce Labs capabilities to support scalability and insights new test automation frameworks.

Test automation plans can be used across an expanded number of frameworks including: Cypress, Playwright, TestCafe.

It simplifies setting up and maintaining test environments, offers parallelization at scale and unifies test results for better analysis and debugging.

https://saucelabs.com/platform/sauce-testrunner-toolkit

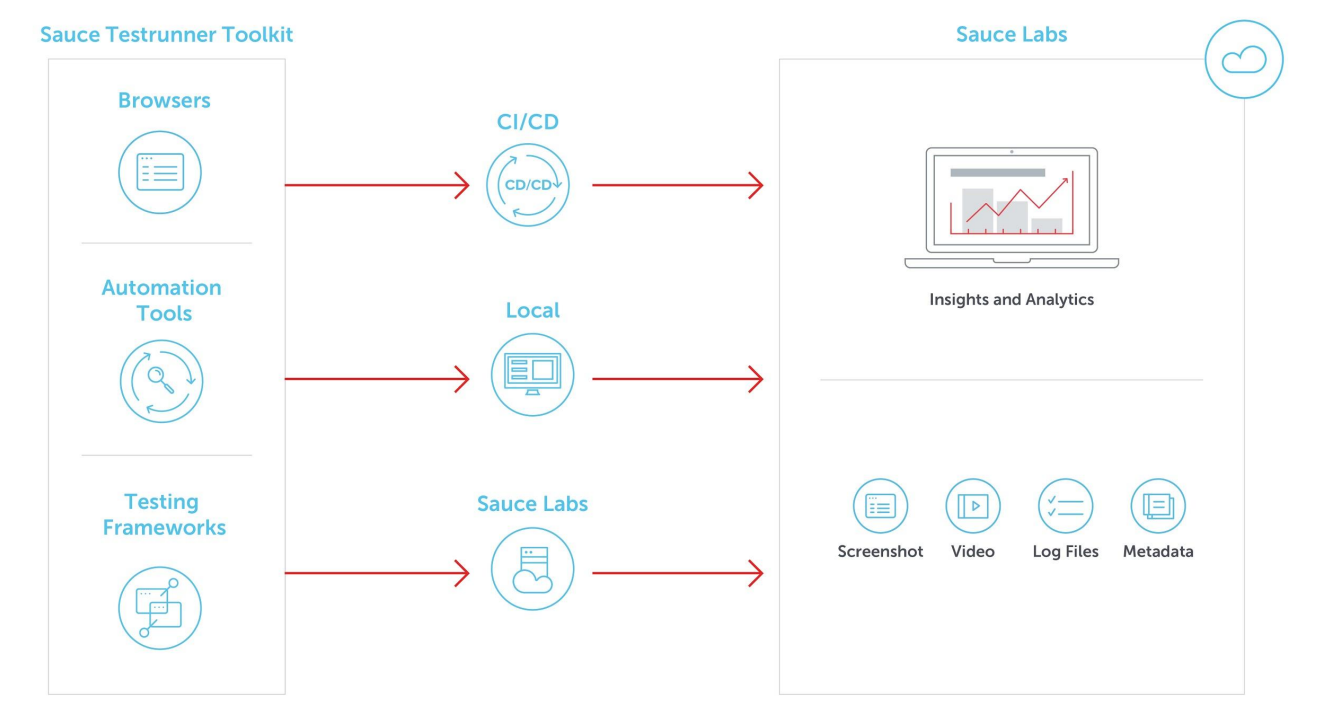


Sauce Testrunner Toolkit (Beta)

Simplify test maintenance with pre-configured containers or VMs

Run tests in parallel in CI/CD or on Sauce Cloud to speed test execution.

Report test data to Sauce Labs for debugging, analysis, and insights.



Let's Code

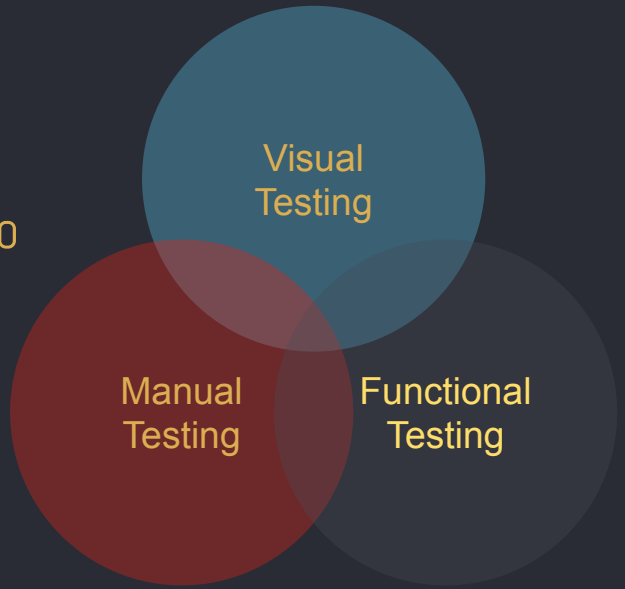
Open
https://github.com/saucelabs-training/test-js
For further instructions

Visual E2E Testing

Anyone know what visual testing is?

Visual E2E Testing

Visual testing is how you ensure your app appears to the user as you intended.



Visual E2E Testing

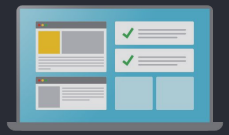
Automatically detect visual regressions across your application UI and increase test coverage by performing both visual and functional testing in the same test run.

Programmatic comparisons

Leverage DOM snapshots to inform page comparisons, allowing for more accuracy in identifying & troubleshooting true regressions, plus helping to eliminate false positives.

Eliminate UI bugs

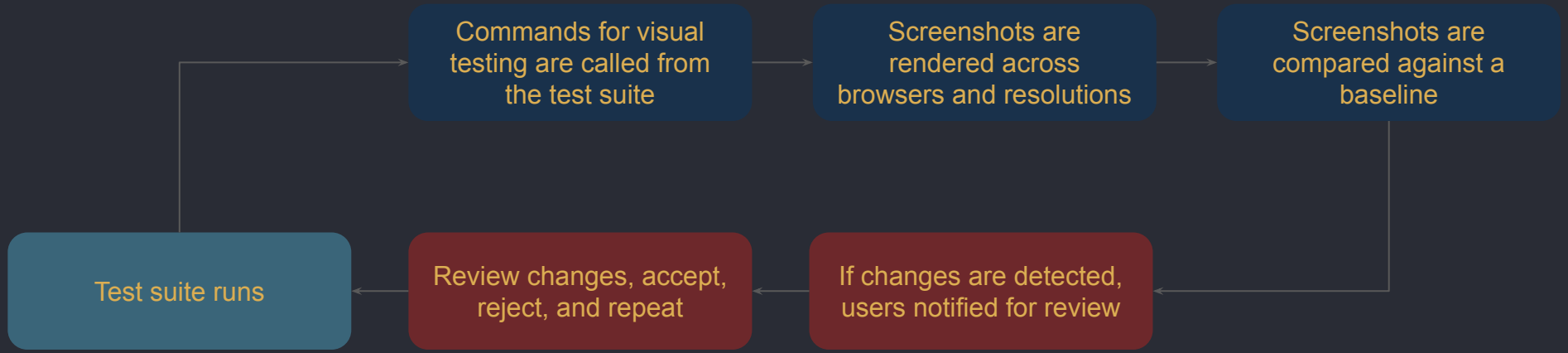
Harness the power of automation to test UIs across different browsers and resolutions. Spot UI inconsistencies and fix them early in the development cycle.



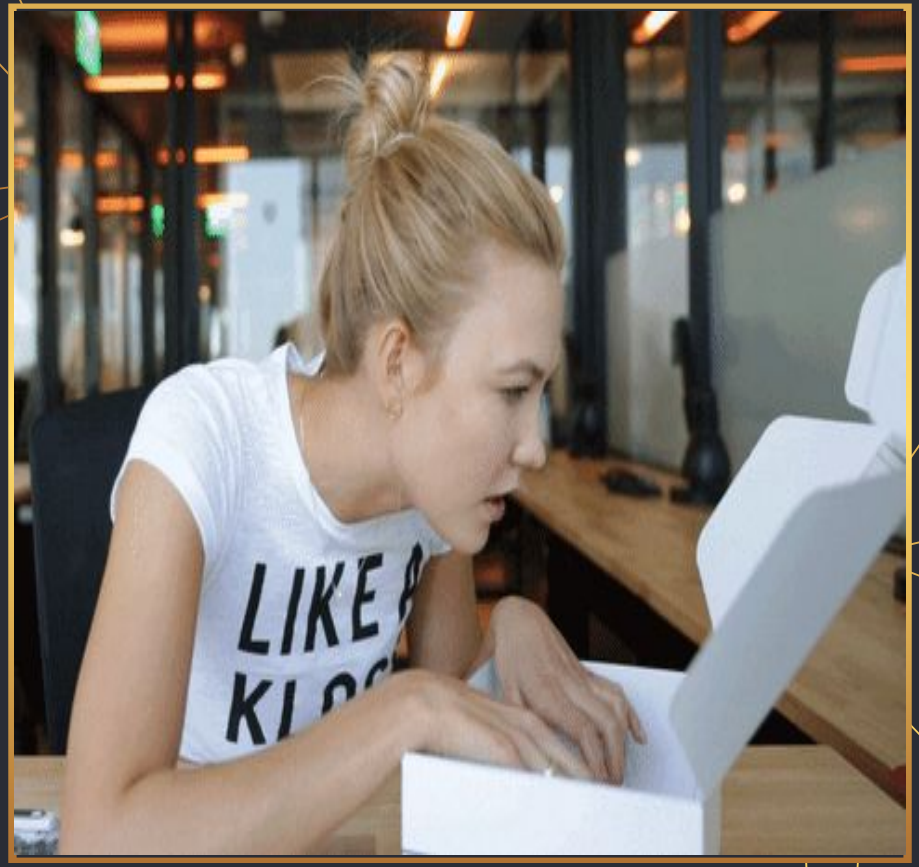
Leverage existing tests

Maximize the investment in test automation and increase test coverage by performing both visual and functional testing in the same test run.

Visual E2E Flow



Let's Get Back To Code



Your Feedback

https://www.menti.com/bacg72yvbf

ultimateqa.com

@nikolay_a00

Thank you!

Don't forget to follow us

😁🙏

@christian-bromann

@bromann