headspin + Pinterest

"This peace of mind from preventing regressions gives us the space and time to focus on what matters most to us–delivering an amazing experience to Pinners around the world."

Pinterest Performance

Pinterest is the biggest dataset of ideas ever assembled, with over 100 billion recipes, life hacks, design ideas, and fashion inspiration, and more than 250 million users around the world.

The Challenge

User experience is crucial to Pinterest's success. In 2016, the Pinterest performance team ran what they called a "hacky experiment" that increased mobile-web home-landing page performance by 60 percent and mobile signup conversion rate by 40 percent. Their experiment proved that the faster their app loads, the higher the conversion rate and user experience.

THEY FACED TWO CHALLENGES

1. Increasing Pinterest's speed for all users regardless of device type or location.
2. Increasing the speed on Android devices speci ically (Pinterest ran slower on Android devices compared to Apple).

"With more than 75 percent of Pinterest sign-ups coming from outside the U.S., we needed to speed up our Android app and maintain that speed even under constant development and new feature additions that might slow things down." - Pinterest Performance Team

THE RESULTS

- 60% faster in-app load times

- Detected 30 slowdown regressions, which would have added 3 seconds to the overall load time for each user if they had not been detected

- Regressions solved in 21 hours vs multiple days historically

- Regression caught earlier in the cycle and never released to users

"Visibility into speed is crucial, especially for key interactions that make Pinterest so useful."

Pinterest Performance Team

HOW THEY MEASURED RESULTS

"For every main action on Pinterest — like loading the home feed, tapping to see a Pin closeup or searching — we defined a metric called Pinner Wait Time (PWT). Each metric measured the time from when a Pinner initiated an action (e.g. tapping a Pin) until the action was considered complete from the Pinner's perspective (i.e. the Pin closeup view loaded)." - Pinterest Performance Team.

The Solution

"Seeking testing precision and alert capabilities, we chose to use HeadSpin Nimble, a cloud-based continuous performance testing tool that easily integrated with our process and produced actionable results."

The Pinterest Performance Team implemented Nimble, a HeadSpin product, to create regression tests that run on Android builds generated from code changes and alerted Pinterest when a PWT metric exceeded designated thresholds.

When there were no alerts, they knew the app was good to go, which boosted confidence in merging pull requests and releasing it to Pinners.

When they did receive alerts, they resolved the regressions in ~21 hours, which is far less time than the multiple days it previously took the team to identify and fix a regression.

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"With HeadSpin Nimble we detected ~30 slowdown regressions over the course of six months. Since our alert threshold was 100 milliseconds, these regressions, if released to our production app, would have accounted for at least three seconds of additional wait time. Aggregated over the hundreds of millions of actions taken each day, it had the potential to be a significant amount of time wasted. By catching regressions early in the cycle, they were never released to Pinners."

About HeadSpin

HeadSpin Inc. empowers development, QA, operations, and product teams to deliver flawless digital experiences across all delivery channels.

"We rely on HeadSpin Nimble for insight into how we're doing against our goals to not only maintain but also improve PWT (Pinner wait time) across our platforms."

Pinterest Performance Team