geomagical labs

> " *APPLAUSE HAS BEEN A GOOD PARTNER: THEY KNOW WHAT WE'RE BUILDING. THEY KNOW WHY WE'RE BUILDING. THEY KNOW OUR GOALS AND HELP US BY GIVING GOOD FEEDBACK, SHOWING US WHERE THINGS ARE NOT WORKING."*

ASHEEM MAMOOWALA, HEAD OF WEB AND MOBILE ENGINEERING, GEOMAGICAL LABS

CUSTOMER

Furnishing a home is a uniquely personal experience. Buyers assess functional needs, budget and space considerations alongside aesthetic preferences — with different members of the household often bringing different priorities to the table. The ability to see how a specific item will look in an existing space can help consumers choose confidently, particularly for larger purchases such as cabinets or couches.

Geomagical Labs' web tools and apps allow furniture shoppers to create simulations of their rooms to see what different furnishings look like in their homes. Users upload photos of the rooms they want to decorate, then computer vision and augmented reality allow them to explore design options.

CHALLENGE

"We are building a novel consumer experience for home shopping," said Asheem Mamoowala, Head of Web and Mobile Engineering at Geomagical Labs. "It is technically complicated: combining AI, 3D graphics and mixed reality delivered to a global audience on diverse, consumer-grade hardware, and with the consumer focus and the brand we need to support, our products need to just work. Getting quality right is mission critical."

Meeting those high customer standards starts with training the company's machine learning algorithm on a broad set of data. Geomagical Labs needed to capture scans of a variety of interior spaces, including different room types with diverse sizes, shapes, colors, furnishings and lighting conditions. The company also needed to capture scans using varying types of hardware, to reflect the range of devices its customers use.

COMPANY
Geomagical Labs

INDUSTRY
Retail

TESTING TYPES
Functional testing | AI/ML training data capture

APP TYPES
Mobile | Web

CHALLENGES
- Capturing diverse real-world data to train the AI algorithm
- Validating the accuracy of room visualizations created using customers' images, devices and product selections
- Testing functionality to prepare for successful launches in multiple countries and languages around the world

RESULTS
- Quickly sourced diverse, high-quality training data for the AI algorithm from various markets around the world
- Ensured coverage across devices, OSes, networks and languages the internal team could not test
- Delivered cost savings in operations
- Reduced cycle times from six weeks to two weeks

APPLAUSE°

In addition, the company was preparing to launch in multiple countries worldwide and needed to ensure its products worked correctly in every market. This called for in-market testing across the most popular devices and OSes in each region prior to launch to find and correct defects before they reached new customers.

Geomagical Labs is a small part of a larger brand: a holding group owns the company, which functions as an independent research and product lab for a global furniture retailer. Living up to the same quality standards as a much larger organization, despite having a much smaller staff and budget, takes work. Mamoowala said, "knowing that the quality of our products is meeting the expectations of the parent brand is really important. Otherwise we wouldn't have buy-in to continue growing and expanding."

SOLUTION

In 2021, Geomagical Labs began working with Applause to augment the team's ML training data with a wider spectrum of real homes. With access to over 1 million community members globally, Applause could quickly capture real-world data to help train the company's algorithm — including interiors featuring colors, lighting conditions and layouts Geomagical Labs couldn't easily find. "One of the key things that Applause brings us is people with a wide diversity of interior spaces, phone hardware, lighting conditions, furnishing types and colors of rooms. And that's important because the real world is very diverse," said Mamoowala.

The partnership expanded to include data capture in different regions to help prepare for launches in new countries, as well as functional testing for the website and apps. "It's been really great to have Applause — we can say, 'Hey, can you get us a bunch of people in Spain or Germany or Japan.' Being able to do that with a couple weeks notice is game-changing for us," said Mamoowala. "It allows us to go into a country and know we're ready for customers to take our product on; we know that the results will be good."

Geomagical Labs has small QA teams, one dedicated to web and another for mobile, though Mamoowala said that quality is a shared responsibility. "As a small company everybody's involved — we're all checking the product very frequently. We have specific people dedicated to make sure we're getting to the finish line at a high quality, but then everyone else contributes as well." Applause's contributions center around devices and areas the in-house team doesn't cover. "We lean on Applause to do the scaling out of that testing: device diversity, regional diversity, language diversity."

RESULTS

Mamoowala said that data from Applause has been critical in training Geomagical Labs' applications as they evolve. In addition to the initial algorithm training, he said, "we also then need to train it on every change or every improvement. Being able to do this over and over again in a repeatable way is

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fantastic. Our research team can rely on Applause as our operations partner for gathering the ground truth data, as we call it."

The partnership with Applause has saved Geomagical Labs both time and costs, according to Mamoowala. "As we grow and launch, it's allowed us to be nimble with a limited budget," he said. "We save time by being able to bring on a team of qualified, experienced testers into our testing mix on a weekly basis or bi-weekly basis, so we can get our product out to this consumer market."

Applause's ability to quickly source qualified testers in specific markets came as a pleasant surprise. "We have to generate hundreds of captures routinely, and to go and source people in different countries in different languages where we may not have the expertise would be a challenge. Over the last few months, we've launched into six different countries," said Mamoowala. "Applause is able to source people and get expertise on board. That's a huge cost savings where we don't have to have people doing those operations."

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With a product still in relatively early stages of design and development, working with Applause has allowed the team to maintain coverage and speed before the application is ready for more extensive test automation. "You don't know if the design of your product will change quickly or not," Mamoowala said. Rather than investing in too much test automation, or potentially spending time automating the wrong areas, the team has done some test automation, he explained, "But then we rely on this scale up that Applause provides. It saves us a ton of time in testing, shrinks down testing cycle times and allows us to release at a high velocity."

Feedback from Applause has helped Geomagical Labs evolve its product and user experience. "The AI capture program wasn't very satisfactory at the end of last year and beginning of this year. So we spent a lot of time together, collaborating on how to make this less error-prone and reduced the cycle time from six weeks to two weeks or one week," said Mammowala.

"Applause has been a good partner: they know what we're building. They know why we're building. They know our goals and help us by giving good feedback, showing us where things are not working in our collaboration but also in the product," Mamoowala said.

ABOUT APPLAUSE

Applause is the world leader in testing and digital quality. Brands today win or lose customers through digital interactions, and Applause alone can deliver authentic feedback on the quality of digital assets and experiences, provided by real users in real-world settings. Our disruptive approach harnesses the power of the Applause platform and leverages a vetted community of more than one million digital experts worldwide. Unlike traditional testing methods (including lab-based and offshoring), we respond with the speed, scale and flexibility that digital-focused brands require and expect. Applause provides insightful, actionable testing results that can directly inform go/no go release decisions, helping development teams build better and faster, and release with confidence. Thousands of digital-first brands — including Ford, Google, Western Union and Dow Jones — rely on Applause as a best practice to deliver the digital experiences their customers love.

Learn more at: www.applause.com