

CASE STUDY



Enabling Smarter Skin Care with Machine Learning

PARTNER

Olay

INDUSTRY

Skin care

OBJECTIVE

Develop a tool that enables smarter, more personalized skin care

SOLUTION

A machine learning-powered platform utilizing selfie photos

FOCUS AREA

AI and Human-Machine Collaboration

Olay, the Procter & Gamble skin care leader, is committed to the science of skin care. Olay collaborated with PARC to develop a machine learning-powered platform that would enable smarter, more personalized skin care for women.

OBJECTIVE

Develop a tool that enables smarter skin care choices

Making the right skin care choices can be difficult. For many women today, an overabundance of products on the market together with a lack of deep scientific skin care knowledge can result in uninformed experimentation with skin care products. This can lead to frustration, wasted money, and undesirable results. Olay wanted to develop an easy-to-use tool that would make skin care smarter and more personalized for women.

WHY PARC?

Deep capabilities in building advanced machine-learning systems

How do you take the knowledge found inside a lab or behind a counter and personalize it for every woman's unique face? The answer is machine learning. Machine learning uses algorithms to learn from and make predictions from large amounts of data, in this case, skin features. Olay partnered with PARC because of their deep experience and capabilities in building advanced machine-learning systems across industries.

“Working with PARC, we were able to utilize machine learning to develop a platform that can both inform and delight Olay customers.”

– Dr. Frauke Neuser, Associate Director Scientific Communications, Olay, Procter & Gamble

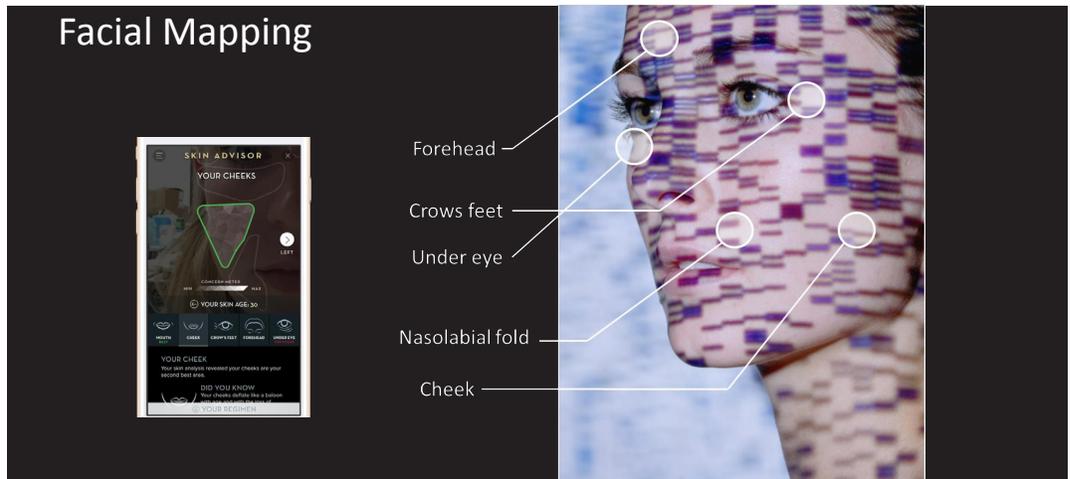


Image courtesy of Olay

SOLUTION

Olay Skin Advisor machine learning-powered platform

After early discussions, the conceptualized solution was defined as a smartphone platform that could perform personalized skin diagnosis using selfie photos and make recommendations for product and regimen changes. Repeated use would improve results and provide deeper insights. PARC's service for Olay was framed into two capability clusters: the technical solution and the user experience. For the technical cluster, PARC computer vision experts developed software to help control variables like lighting, camera distance and facial expression, and PARC machine learning specialists trained models to detect the presence of target skin features, using Olay's human-graded image databases as ground truth. For the user experience cluster, PARC social scientists worked with Olay Product Research specialists to observe and interview Olay customers to frame hypothesis about drivers of believability in the recommendations, enjoyment of the platform, and sustained use. These were used to design "probes" which were tested with customers over iterative cycles.

RESULTS

Over 1 million users and continued co-development

PARC delivered to Olay a suite of algorithms and UX elements and in March of 2016 the Olay Skin Advisor platform was released. The platform enabled accurate analysis of users' skin, informed users of what was happening with their skin, suggested product and regimen changes, and provided a compelling user interaction flow. The platform has reached several notable milestones for Olay, including over four million visits worldwide. Users of the platform exhibited 2x the conversion rate and 40% larger basket size of regular Olay.com visitors and 3x lower bounce rate and 4x time spent as engagement measures. The platform also now has local versions in ten countries. Today, PARC and Olay continue to explore taking additional co-developed technologies to market within the Olay Skin Advisor platform, following the strategic roadmap established at the start of the partnership.