## Engage: AI-Powered
Shopper Engagement and Conversion

CUSTOMER

One of the largest omni-channel retailers stores in the world.

PROBLEM

The brand wants to provide an exceptional shopping experience with relevant choices and recommendations that cater to the individual online visitor. The challenge, however, is that at least 80% of online shoppers are anonymous, making it incredibly difficult to identify the user in order to personalize the digital experiences. Of particular interest was the gamified shopping experience that used A/B testing to understand customer preferences on the mobile website. Using real-time session, the department store needed help personalizing the user's mobile shopping experience.
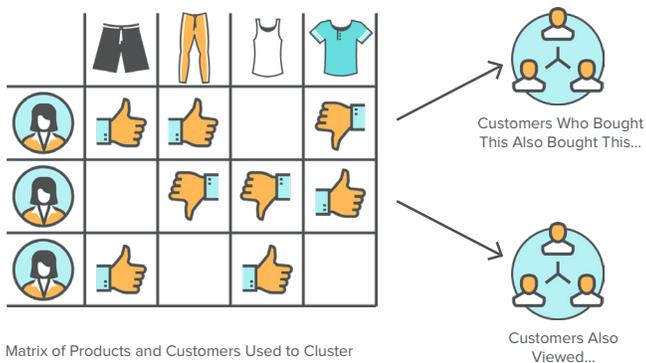
Matrix of Products and Customers Used to Cluster Similar Shoppers

Figure 1: First generation recommendation engine

SOLUTION

The brand decided to use CognitiveScale's augmented intelligence and AWS infrastructure to apply machine learning to digital commerce. The first step was to ingest their entire apparel catalog so CognitiveScale's AI could build machine-driven understanding of the products and their associated features. As customers were playing the swipe and shop game, they were effectively telling the system what they like and what they don't like, building individual "profiles-of-one" that optimize the subsequent product recommendations to the user in that same session. Over time, the AI system continuously learned from the volume of incoming site visits.
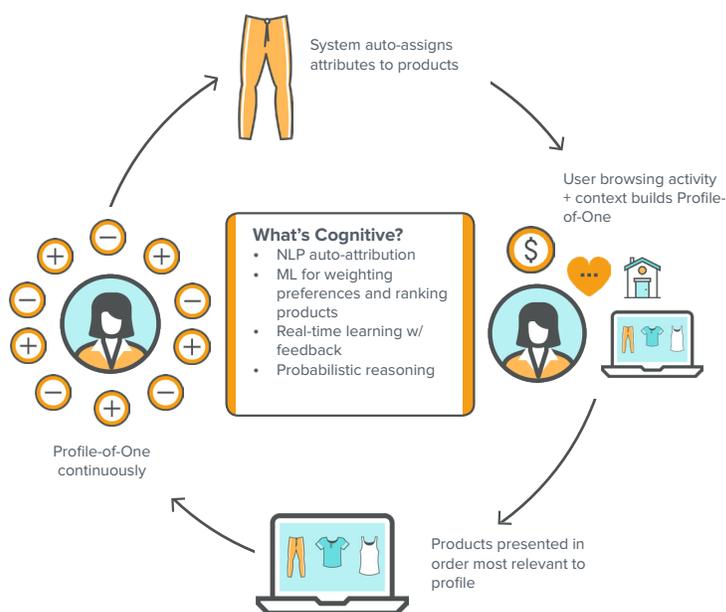

What's Cognitive?
- NLP auto-attribution
- ML for weighting preferences and ranking products
- Real-time learning w/ feedback
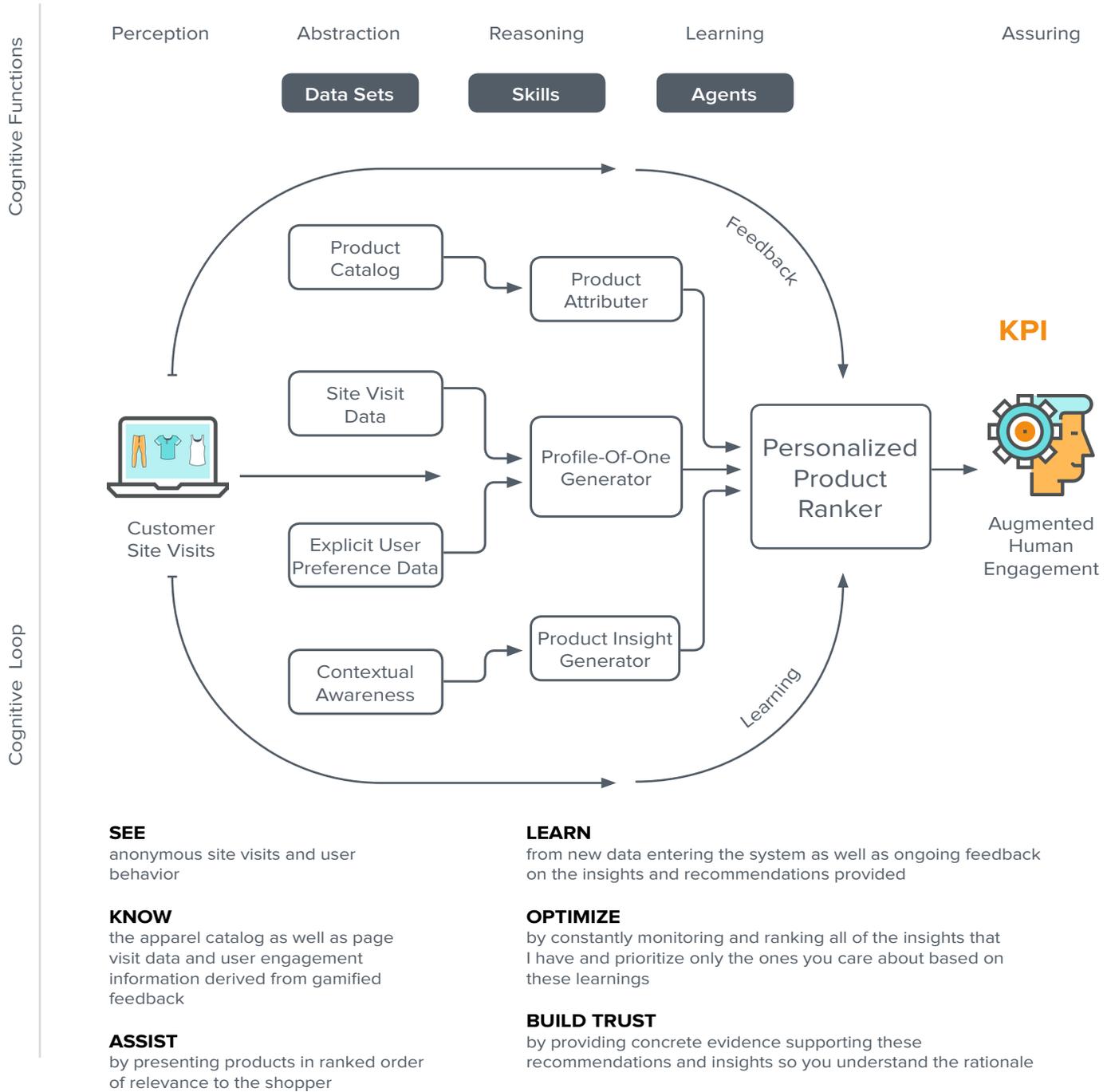- Probabilistic reasoning

Figure 2: Every offer ranked based on compatibility to individual shopper profiles

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IMPACT

With augmented intelligence and machine learning, the brand achieves real-time, same-session personalization, even for anonymous site visitors.

- 23% increase in sales per session
- 44% increase in customer and visitor engagement

Hyper-Personalized Shopping Agent Anatomy

Cognitive Functions

Perception Abstraction Reasoning Learning Assuring

Data Sets Skills Agents

Product Catalog

Product Attributer

Site Visit Data

Profile-Of-One Generator

Explicit User Preference Data

Contextual Awareness

Product Insight Generator

Customer Site Visits

Personalized Product Ranker

Feedback

Learning

KPI

Augmented Human Engagement

Cognitive Loop

SEE
anonymous site visits and user behavior

KNOW
the apparel catalog as well as page visit data and user engagement information derived from gamified feedback

ASSIST
by presenting products in ranked order of relevance to the shopper

LEARN
from new data entering the system as well as ongoing feedback on the insights and recommendations provided

OPTIMIZE
by constantly monitoring and ranking all of the insights that I have and prioritize only the ones you care about based on these learnings

BUILD TRUST
by providing concrete evidence supporting these recommendations and insights so you understand the rationale

About CognitiveScale

CognitiveScale sells augmented intelligence software that solves complex business problems at scale for financial services, healthcare, and digital commerce markets. Built on its Cortex augmented intelligence platform, the company's software help enterprises apply AI and blockchain technology to increase user engagement, improve decision-making, and deploy self-learning and self-assuring business processes.

Headquartered in Austin, Texas, CognitiveScale has offices in New York, London, and Hyderabad, India, and is funded by Norwest Venture Partners, Intel Capital, IBM Watson, and Microsoft Ventures.

For more information on the company, please visit us at cognitivescale.com and follow @cognitivescale on Twitter, Facebook and LinkedIn.

Contact an AI specialist at cognitivescale.com/contact