The Age of the Anonymous

An ecommerce guide for selling to anonymous visitors

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Introduction: The rise of digital retail

The Internet has become a trillion-dollar marketplace. Since the year 2000, ecommerce has grown at more than 18% each year, and American consumers now spend more than 15 cents of every dollar online.

With such growth, digital retail is critical in every industry. All brick-and-mortar retailers have built online businesses, and now compete with pure-play ecommerce companies. And as the Internet marketplace has grown, consumer behaviors have changed.

At first, the Internet was mostly a catalog. Consumers decided what to buy online and completed orders by phone or mail, and over time became comfortable checking out online. To keep up, retailers needed to build fast and secure online ordering.

Next, digital retailers built full relationship lifecycles with their customers. They began to use email marketing, retargeting, and other tactics to attract customers, and to use CRM and personalization to keep customers coming back. These valuable tactics critically depended on gathering as much data as possible about each customer, and ideally about each site visitor.

Soon mobile became the critical ground for ecommerce. To stay relevant and keep growing, retailers needed mobile-native ecommerce experiences, and began investing in native apps and SMS marketing strategies. At the same time, retailers adapted to social media with its own new set of strategies.

Throughout these and other changes, retailers have adapted by learning more about each visitor to understand who they are and why they buy. Current marketing strategies depend on technology investments that use personal data to convert site traffic into revenue.

But while ecommerce growth will continue, the next phase of ecommerce marketing will change how retailers approach every channel and every strategy. Welcome to the Age of the Anonymous.

Ecommerce Share of U.S. Retail Sales by Year (%)
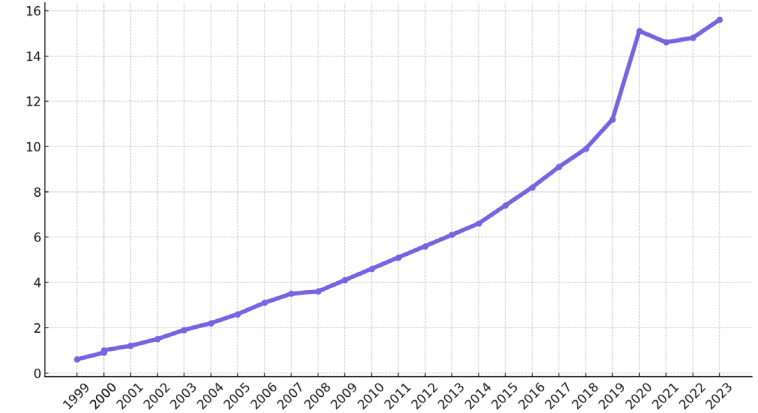
Source: Retail Indicators Branch, U.S. Census Bureau, 2023

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The internet is increasingly anonymous. How will you respond?

As ecommerce has grown, consumers have also grown more aware of the volumes of data gathered about them—and, increasingly, they do not want to be known.

This trend in consumer preference has been driven by years of large data breaches, after which consumers learned that companies often hold vast amounts of personal data about them. Consumers became aware that data brokers aggregate, match, and classify data about them for sale to marketers. Consumers had experiences in which personalization caused them embarrassment, caused them discomfort, revealed private information to their coworkers, and spoiled their Christmas surprises for their families.

In response to repeated negative experiences, consumers want to be anonymous online. And both governments and technology companies are responding to consumer demands. Consider the trends of recent years in privacy and anonymity.

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▶ **Private browsing.** Starting in 2005, web browsers began adding tools that allowed Internet users to use the Web with limits on cookies, web tracking, and features such as location sharing. These privacy tools have added more features over time to block ever more information from the websites consumers visit. Stronger tools such as VPNs and Tor have also increased in popularity. By 2023, 46% of Americans reported they have used private browsing.

▶ **Legal protections.** The ability of websites to collect personal information about visitors has become regulated, most notably by the California Consumer Privacy Act and European Union General Data Privacy Regulation (GDPR). These and other privacy regulations generally require websites to inform visitors what data is collected about them and allow visitors to opt out of data collection, among other rights. With the GDPR requirement that consumers must opt-in to receive first-party cookies, as many as 8 in 9 consumers no longer accept these cookies.

▶ **End of third-party cookies.** Third-party cookies have long been a valuable tool for retailers to identify and track visitors. With rising legal and consumer concerns, major advertising networks are ending support for third-party cookies. Google Chrome intends to phase out third-party cookies fully in 2024. Apple Safari has blocked third-party cookies by default since 2020 and Mozilla Firefox has blocked third-party cookies by default since 2019.

By 2024, brands with the highest levels of loyalty and repeat business report that 40% of their site traffic is anonymous, while some brands report anonymous rates as high as 98%.

Retailers face an ecommerce landscape in which major advertising and technology networks, governments, and consumer preferences are all trending toward anonymity. On a cookieless Internet, in which collecting personal data carries increasing risk, retailers need to respond.

But the investments to date leave much to be desired.

▶ **Personalization.** These techniques are extremely valuable, but only work for known traffic.

▶ **Matching.** This technique to unmask anonymous visitors is decreasing effective and carries greater risk.

▶ **Sitewide incentives.** Promotions available to all visitors, regardless of whether they are anonymous, are expensive and harm brand reputation.

An anonymous Internet demands new ways of thinking in order to convert, sell, and grow. Just as retailers adapted to ecommerce at the dawn of the digital age, they will adopt a new mindset for the Age of the Anonymous.

An anonymous Internet demands new ways of thinking.

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Living in the Age of the Anonymous: 3 mindset changes for ecommerce

Now and in the years to come, retailers can no longer pursue the same strategies that have worked in the past. More personalization tech, more matching, more promos: These kinds of technologies will face diminishing returns and influence an ever-smaller share of site visitors.

Ultimately, conversion and growth in this new age requires new on-site marketing strategies. There are three major shifts in thinking that retailers should adopt.

1. **Get out of their way.** Many of the current ways to identify and convert visitors put more information in front of visitors, interrupting their buying journey. Tactics such as pop-ups offering a discount in exchange for an email, or banners announcing sitewide promos, can distract visitors from completing their purchases. In the Age of the Anonymous, Internet users are not just browsing privately–they're also blocking ads and pop-ups. Increasingly, visitors respond better to a clean ecommerce experience. In response, retailers must shift their thinking to work with fewer interruptions instead of adding new ones.

2. **Don't match–sell.** In response to the rising tide of anonymous traffic, retailers have turned to ever-more complex matching techniques. Even when these techniques work, they still require the retailer to follow matching with personalization techniques to convert visitors. In the Age of the Anonymous, the costs of matching plus personalization will continue to rise while their effectiveness will continue to fall. This reality suggests that retailers must shift their thinking away from how they can better match anonymous visitors and instead focus on how better to sell to anonymous visitors without first identifying them.

3. **Focus on visitor behavior.** Ecommerce has the opportunity to recreate selling techniques that work for in-person shopping. In the brick-and-mortar world, all visitors who walk through the door are typically anonymous. Retail staff can increase sales– their conversion rates–by observing the behavior of shoppers and responding accordingly. Experienced staff know which people appear likely to buy and which are just browsing, and focus their assistance and upsells on the people who are most likely to respond. Ecommerce retailers can do the same–if only they

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have the eyes and ears to observe what their visitors are planning to do on site. Fortunately, AI technologies now offer exactly this capability. Retailers can shift their thinking from trying to know who each visitor is and instead try to know what each visitor wants.

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Converting the anonymous with artificial intelligence

With the latest advances in AI, retailers can convert anonymous visitors based on their behavior. This AI technology uses no personal data, meeting the challenges of an anonymous Internet and working equally well for the small share of known visitors. Best of all, AI-based techniques provide the information that each visitor wants so retailers can use fewer interruptions in the shopping experience.

Behavioral AI is the key that unlocks converting anonymous visitors without first needing to identify them. This AI can passively observe what each visitor is doing on the site—where they click, how quickly they move, how often they backtrack, and so on. Each visitor session will have a binary result: either the visitor will make a purchase, or they won't. AI excels at correlating complex trends with binary outcomes, and is particularly valuable for tasks with large data volumes that can't be modeled using other methods. Using on-site behavior to predict purchasing is exactly such a task.

Retailers can therefore deploy behavioral AI that predicts accurately whether the visitor is likely to make a purchase

or not. This signal of purchase intent can then be used immediately to drive a conversion action, such as a special offer for the visitor. At no point does the AI or the offer require that the retailer identify the visitor, meaning that the behavior-based signal will be calculated for all traffic—both known and anonymous. While this prediction is uniquely important for the anonymous segment, it can also be used in conjunction with personalization tools to improve conversion of known traffic.

Using behavioral AI, retailers can get rid of many interruptions that otherwise hinder conversion. Without AI, many retailers will try to convince visitors to identify themselves using techniques such as pop-ups requesting email addresses. With this AI, retailers can choose not to use such techniques and see lower bounce rates as well as higher conversion.

Without behavioral AI, retailers have few levers to use for on-site conversion other than sitewide promotions, which both harm margin and can distract visitors who are otherwise ready to buy. With this AI, retailers can pull back on sitewide offers and replace them with offers targeted only to the visitors who need them to convert.

When transitioning from existing sitewide tools and tactics, retailers can be confident that behavioral AI is improving

AI allows retailers to do things that were not previously possible.

their commercial results. A well-designed AI tool set will include built-in A/B testing that ensures every new tactic has the desired result of higher conversion, higher revenue, higher AOV, or another goal. This 100% testing is critical to the transformation of ecommerce in this new age.

It is no exaggeration to call AI a transformative set of technologies. AI allows retailers to do things that were not previously possible, starting with converting the anonymous. In just a few years, AI will have an even more fundamental impact on ecommerce. Retailers that wish to grow will need to begin embracing AI techniques now.

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Ecommerce 2030: Preparing for the anonymous present and the AI future

To thrive in the Age of the Anonymous, retailers are beginning to embrace behavioral AI. Yet many other applications of AI are emerging into public awareness. Most notable have been the astonishing advances in generative AI, based on large language models (LLMs), and in the emerging area of large action models (LAMs). Together with steady progress in robotics–also called AI agents–LLMs and LAMs will present new opportunities for retailers to sell and grow in coming years.

These important new technologies are at the leading edge of AI.

▸ LLMs are advanced natural language processing models that use AI techniques to understand, generate, and manipulate human-understandable text on a large scale. These models can power products that offer useful responses to user inputs, transforming how language-based tasks will be performed on the Internet.

▸ LAMs are models that use AI techniques to translate human-understandable inputs into sequences of tasks on a large scale. These emerging models can power products that take actions on the Internet based solely on human instructions, without further intervention.

▸ Robotics is the long-established field of constructing AI agents that operate with a degree of autonomy in the physical or digital world. These AI agents are beginning to function in ways that no longer require step-by-step instructions or tightly controlled environments.

Consumers may use physical AI agents to complete real-world purchases.

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Taken together, these technologies point to the next wave of retail innovation, one perhaps as transformative as the move from brick-and-mortar to ecommerce.

As LLMs become commonplace, consumers will expect to be able to ask a machine natural questions and receive natural answers. This expectation will change how consumers discover products, moving beyond search and associated marketing techniques. Consumers will also expect retailers to employ useful LLMs to assist them. As current experiences with LLMs have shown, however, the accuracy and currency of LLM information can't be taken for granted, and so will be paramount for retailers in the near future. Very soon, retailers will need to optimize their sites for LLMs just as they have for search engines, or else lose market share.

As LAMs roll out, consumers will expect a machine to perform a requested task correctly. A world of LAMs for ecommerce will begin to change promotional strategy, site design, merchandising, and more. For example, consider a consumer who is interested in fashion and wants to buy a new shirt. They will instruct their LAM, likely using voice commands, and the LAM will complete the purchase. Perhaps they ask for the most popular product on a particular site. Or they may ask to buy a particular brand from any site that can guarantee same-day delivery. Or they may ask for the best deal on a specific brand, or the best value under $30. In order to make a sale under these circumstances, the retailer will need to interact with the LAM, not the consumer.

The potential of AI agents to transform ecommerce has long been apparent in warehousing and distribution, and will begin to be felt in ecommerce sales. In limited circumstances, consumers may use physical AI agents to complete real-world purchases in ways that aren't yet enabled with apps and delivery services alone. More widespread will be digital AI agents that act above the level of LAMs– rather than simply complete tasks in the digital world, these LAMs will manage the consumer's goals in ways that involve many decisions and tasks. Retailers will not only have AI agents autonomously shopping on their websites, they also will have to market and sell to these AI agents.
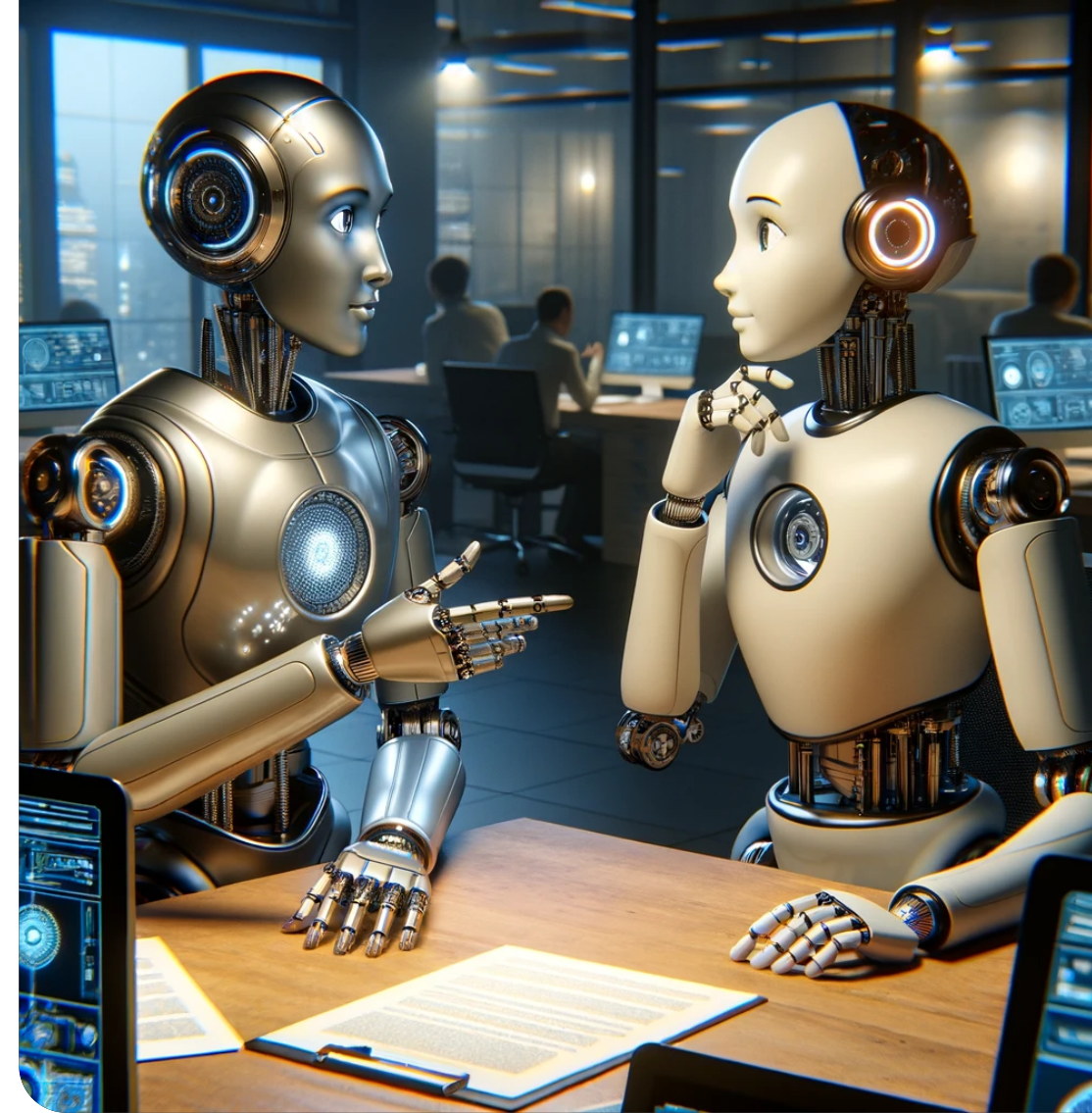
By 2030, retailers will deploy AI technologies to interact and negotiate with the AIs of their customers.

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By 2030, the AI transformation of ecommerce will be profound, yet still likely in its early stages. By 2030, retailers will deploy AI technologies to interact and negotiate with the AIs of their customers. Retailers will deploy a new generation of optimization, catering to consumer goals rather than search terms. Retailers will use interfaces that communicate equally well with humans and machines. And all of this AI transformation can be expected to use behavioral signals rather than personal data. Retailers that have fallen behind may never catch up.

The table provides a brief description of how LLM, LAM, and AI agent advances will change how consumers complete three common types of transactions.

Adjusting to this new world of AI begins with deploying AI now, where it can be most effective. As consumers will increasingly appear to retailers not just as anonymous visitors, but increasingly as anonymous machines, retailers will need to be ready with behavioral technology that understands what the visitor wants and how best to provide it—without relying on personal data. This exciting age begins with behavioral AI.

Consumer buying in the AI future: Three examples

	Everyday product (e.g. soap)	Discretionary product (e.g. fast fashion)	Everyday service (e.g. auto repair)
How it's bought today	Search for soap, compare options, find desired product, order for delivery	Read about fashion trends, compare design and prices on several sites, order	Get a service alert, go to provider website, make appointment, take car for service
How it's bought with LLMs	Ask where to buy soap, follow link to desired product, order for delivery	Ask what is trendy today, follow links, decide which is best, order	Get a service alert, ask if it's important, make appointment, take car for service
How it's bought with LAMs	Tell LAM to buy soap within dollar limit, confirm order	Tell LAM to buy a trending product within a dollar limit, confirm order	Tell LAM to make a service appointment if it's important, take car for service
How it's bought with AI agents	"I never want to run out of soap. Order what I like regularly and I'll let you know if I have too much."	"I want to look like my favorite TikToker. Order clothes like theirs, preferring knockoffs to brands, whenever their tastes change."	"Car, drive yourself to the shop and get yourself checked out. Text me when you're home."

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About in-session marketing

In-session marketing from Session AI is the behavioral AI technology empowering retailers in the Age of the Anonymous. This patented AI platform works in real-time to deliver an action based on each visitor's purchase intent, resulting in higher conversion and other commercial outcomes. In-session marketing converts 100% of site traffic–both anonymous and known–without using personal data.

▶ **Predict.** When a visitor arrives on a website with in-session marketing, the AI observes their event stream pattern. In five clicks, the AI uses its model built from billions of past sessions to predict the likelihood the visitor will complete a purchase. This prediction model uses only on-site behavioral data, and never collects or stores any personal data.

▶ **Segment.** With the purchase prediction for the visitor, the model assigns the visitor session into one of three segments: likely-to-buy, on-the-fence, or unlikely-to-buy. Using this segment, the AI will deliver an action from the real-time engine to the visitor.

▶ **Act.** Based on their segment, each visitor may receive an action from the in-session marketing platform. This action is designed to motivate behavior: a purchase, an addition to the cart, or something else. Retailers design, test, and monitor their actions in partnership with Session AI.

The entire process occurs in real time, less than 100 milliseconds from prediction to action.

With this fundamental new capability, retailers are seeing significant rises in conversion. They are removing interruptions such as pop-up banners and relying less on expensive sitewide offers. They are making their pricing, merchandising, and promotional strategies more effective and proving the impact with 100% A/B testing.

For retailers that aim to thrive in the Age of the Anonymous, and prepare for the AI-driven marketplace of the near future, in-session marketing is the technology to evaluate now.

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About Session AI

Session AI is the pioneer of in-session marketing, the critical capability that leading online retailers need to convert site visitors in a privacy-first world. Using patented artificial intelligence, Session AI predicts purchase intent in five clicks, enabling online retailers to provide each visitor with the right incentive in real time. Major brands rely on Session AI to increase conversion and margin without the need for personally identifiable information or third-party cookies.

Learn more about the future of ecommerce marketing at www.sessionai.com.

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