



AI for Personalization Blueprint

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Why Artificial Intelligence Is a Must for Personalization

It has never been more important for your brand to master the art and science of personalization.

The vast majority of B2C and B2B consumers expect sophisticated personalization from brands. A full 86% of B2B consumers expect you to understand their personal preferences, [says Gartner](#). And 71% of B2C consumers expect the same. Not to mention, they expect you to act on it to deliver highly personalized experiences.

There's just one (very big) problem:

Of the companies doing personalization, most still personalize based on simple pre-defined rules. ("If you are X, you will see Y.")

Pre-defined rules used to work well enough in the early days of digital experiences. Back then, you didn't have much user data to work with. You could tell what someone clicked on or visited or bought—and that was about it. Limited data meant limited personalization options. So, limited rules weren't a problem.

Today, this couldn't be further from the truth.

Companies have a flood of data on users from a huge number of sources. Consumer interactions take place across more touchpoints than ever. And we have a breathtaking number of ways to personalize content and products based on this data.

These conditions make pre-defined rules woefully inadequate for modern personalization. In fact, pre-defined rules have a few fatal flaws that can actively work against you:

1. They're static. Pre-defined rules don't change. They don't respond to new data. They don't adapt to evolving consumer needs and behaviors. If your customers change, pre-defined rules don't. As a result, they often create an outdated and ineffective customer experience. For instance, you might use static, pre-defined rules to display your latest content first on your website. That's a one-size-fits-all approach that completely fails to take into account a customer's content preferences or display content based on their consumption habits.
2. They can't get full value out of your data. Most companies have a wealth of data that can create better personalization. But it's hard to leverage this data with pre-defined rules. Every new data source used requires more rules to create better personalization. Few teams have the bandwidth to create rules indefinitely to improve their personalization.
3. They don't scale. Every pre-defined rule is manually built and manually maintained. Every pre-defined rule created introduces more complexity, conflicts, and complications. The more complexity, the higher cost of resources and time to manage personalization. That makes it impossible to effectively scale a pre-defined rules-based approach.

These flaws are why top brands are turning to AI for personalization. AI has many ways to overcome the limitations of pre-defined personalization rules. It operates in a fundamentally different way than pre-defined rules.

With pre-defined rules, you manually define and create the personalization rules. With AI, you specify your personalization goal, and it figures out which rules to follow to achieve it.

86% of B2B consumers expect you to understand their personal preferences.

71% of B2C consumers expect the same.

That means:

- AI dynamically and automatically personalizes content and products. It also can adapt and improve on its own over time in response to changing data and behaviors in real time.
- AI uses massive amounts of your data from different sources to provide recommendations. If you have a large amount of high-quality, accurate data, it can rapidly improve your performance.
- AI scales as your personalization program grows since it doesn't rely on manual, pre-defined rules.

In fact, AI can:

- Segment users based on their particular dynamic behaviors and interactions.
- Deliver highly personalized digital experiences exactly tailored to individuals. That includes personalizing based on needs, wants, and behaviors learned over time.
- Increase customer engagement and satisfaction with truly intelligent content and product recommendations, which ultimately increases revenue for your business.

Not to mention, you don't have to build your own AI models with leading solutions. Instead, you can use out-of-the-box AI personalization to see return-on-investment (ROI) fast. According to McKinsey, organizations that have implemented personalization see a 10-15% increase in revenue. That benefit is even bigger in direct-to-consumer businesses, with personalization providing up to a 25% lift in revenue for these types of companies.

Maybe that's why Gartner predicts 80% of all customer contact will take place via AI by 2030. And it's definitely why you should consider using AI in your personalization efforts.

The good news is: That's never been easier to do.

Powerful AI is now accessible to professionals in marketing, sales, and more. Enterprise developers who don't have AI experience can also deploy the technology. You and your team can now operationalize AI at scale while mitigating the risks that can arise when building and deploying AI models.

AI also makes it possible to do effective omnichannel personalization at a 1-to-1 level. That means you can personalize the entire user journey across different devices, allowing you to connect deeper, make more relevant recommendations, and capture the user's attention, loyalty, and engagement.

And the best part?

At no point do you need a degree in data science or machine learning to do it. You just need to understand the following:

- What AI is and what it is capable of doing.
- What AI use cases are available for personalization, and how to find your brand's specific use cases.
- What AI tools and technologies can create real business outcomes for you.

The rest of this guide shows you how through actionable advice, recommendations on use cases and tools to use, and real-world examples of AI personalization using AWS offerings, including [Amazon Personalize](#).

Organizations that have implemented personalization see a 10-15% increase in revenue.

A Quick Introduction to AI for Personalization

To grasp what's possible with AI, you need to understand the technology. But don't worry. You don't need to get a Ph.D. in the subject to do that. All you need is a simple, useful definition of AI. That will allow you to see how it's different—and much smarter—than the technology you use today.

Let's dive in.

What Is AI?

If you ask 10 experts to define "AI," you'll get 10 different definitions given the complexity of the subject. Our favorite is a simple one:

AI is the science of making machines smart.

By "being smart," these machines, in turn, enhance human knowledge and capabilities.

So, what does "being smart" actually mean?

AI is smart because it can determine its own pathways to achieving an overall goal.

To illustrate what we mean, let's look at the traditional software you use today. That software can only do what you tell it to do. You give it rules and instructions. It follows those rules and executes those instructions to the letter.

Let's look at an example:

Say you want to recommend new products, services, or content to users that visit your website. Here's what that typically looks like:

1. You manually segment users into broad categories. You base these categories on a few simple factors. For instance, the user's job title, industry, and whether or not they've taken an action on your site.
2. You then create a set of static personalization rules. Those rules match products and content to users depending on their category. These rules are basic. But despite that, they get complicated quickly. Let's say your users can select one of five job titles and one of four industries. That's 20 different possible combinations of title and industry alone.
3. You set your static personalization rules live. Then, you monitor performance across all your different categories. As you analyze performance, you make manual changes to rules based on the data. These changes take a lot of time and effort.

This type of personalization is probably better than no personalization.

But it's not very sophisticated. It's highly labor intensive. And it's really inefficient. Every step of the way, you're in charge of giving the machine instructions and telling the machine what to do. And it follows them without deviation.

It's like having an army of hard-working interns who follow your instructions literally. They don't offer new ideas. They don't innovate new approaches. They just follow commands.

This is a huge missed opportunity to create a deeper connection with customers, build a meaningful experience, and build trust and loyalty with consumers by showing them you understand their needs and preferences.

AI is "the science of making machines smart."

Thankfully, AI-powered personalization is fundamentally different from traditional personalization.

Let's stick with our example from above. With AI, we can fundamentally transform what's possible with personalization:

1. AI can segment users for you based on a much larger range of attributes and signals. It can learn about your catalog of products and content. It can learn about how users interact with those catalogs. It can segment users dynamically based on their attributes, preferences, and behaviors. And it can segment them into complicated categories without extra work.
2. AI can then personalize content, services, and products to users in real time based on a legion of factors and attributes. And AI doesn't just personalize based on individual factors. It can also personalize in different ways for the same individual based on channel (ads, email, social, etc.).
3. AI can adapt personalization to changing customer interactions automatically. You don't need to manually update or change rules. You don't need to stay on top of mountains of data. AI does it all for you. Just one example: AI is perfect for brands that experience seasonality since it can adjust recommendations based on spikes in, for instance, hotel bookings for certain destinations based on the weather in a given location.

Now, that's impressive on its own. But here's the real AI secret sauce:

AI learns each time it tries to achieve your personalization goals, such as:

- Optimizing for users with no interaction history.
- Increasing overall engagement and average order values.
- Boosting time spent on page.
- Increasing time spent viewing video content.
- Surfacing new items to improve upsell and cross-sell opportunities.
- And more.

In fact, each time you use AI for personalization, it learns more about what your customers like best.

For example, let's say you have a new user who consumes your streaming content across devices. Over time, AI learns that this user likes watching TV on mobile devices and full movies at home. AI then automatically adjusts recommendations for each channel based on that.

In another example, let's say you are a hotel chain that wants to increase customer lifetime value. You can use AI to offer highly personalized property and room recommendations to customers. As AI learns more about your customer's behavior, it can use that information to personalize upsells and cross-sells while the customer is staying at a property.

In every case, AI isn't following the playbook from the last time you personalized an experience for a customer. It's learning from past engagements and improving its recommendations using a new and improved playbook.

That's why AI is so powerful: It has the ability to unlock exponential performance gains over time the more you use it.

AI is like having an army of geniuses at the top of their game working independently for you 24/7.

Traditional software using traditional personalization approaches simply can't compete. And neither can companies using traditional software and approaches. In fact, more than half (60%) of consumers say they will likely become repeat buyers after a personalized shopping experience with a retailer, [according to Twilio](#).

Machine Learning and the Core Types of AI

We've established why AI is much different—and much better—than traditional personalization.

Now, let's define a few final ways of thinking about AI that are important to fully grasp the subject.

The term "artificial intelligence" is a category of technology, not a single tool. It's a broad suite of techniques that leverage smart machines in different ways.

These tools rely on "machine learning" to work their magic. Machine learning is the primary subset of artificial intelligence technology. It's how AI tools achieve goals on their own and learn from their efforts.

There are a couple of steps to make a machine smart. First, humans have to train the machine. We show the machine data, then train it to recognize patterns in that data. Using those patterns, the machine learns how to achieve goals. Once fully trained, it can recognize those patterns and achieve those goals in the wild. It can also then train itself on what it learns rather than returning to its human teachers.

Now, machine learning isn't the only term you'll hear in discussions of AI. You'll also hear terms like:

- Deep learning
- Neural networks
- Robotics
- Reinforcement learning
- Topic modeling
- And many, many more

These terms can be useful to learn. But you don't need to know all the jargon to understand how and where to apply AI in your business or to see real business value from the technology.

In fact, you only need to know that there are four core applications of AI: Language, Vision, Speech, and Vertical-Focused.

Language AI. This is the ability of machines to understand and generate written and spoken words. Language AI technologies and terms you may encounter include:

- Machine translation.
- Natural language generation.
- Natural language processing.
- Sentiment analysis.
- Text analysis and summarization.

An example of Language AI in your everyday life is Gmail's Smart Compose feature. You type an email, and Gmail predicts how to complete your next sentence.

Vision AI. This is the ability of machines to analyze and understand data from still images and videos. In essence, vision AI seeks to automate tasks that the human visual system can naturally do. Vision AI technologies and terms you may encounter include:

- Object recognition.
- Image generation.
- Video generation.
- Emotion generation.
- Optical Character Recognition (OCR).

An example of Vision AI in your everyday life is the facial recognition that unlocks your iPhone. Vision AI determines if the face it is seeing is yours and, if it is, grants you access to the device.

Speech AI. This is the ability of AI to recognize, process, and emulate human voices and speech. Speech AI technologies and terms include:

- Voice recognition.
- Dialogue modeling.
- Speech-to-speech translation.

Machine learning is the primary subset of artificial intelligence technology. It's how AI tools achieve goals on their own and learn from their efforts.

An example of Speech AI is when transcription software recognizes which speakers are saying which words, allowing AI to label their conversation appropriately.

Vertical-Focused AI. Vertical-focused AI is artificial intelligence designed to perform advanced predictive functions for specific use cases, industries, or verticals. Examples of vertical-focused AI include:

- Personalization.
- Forecasting.
- Pattern recognition.
- Anomaly detection.
- Fraud detection.

An example of Vertical-Focused AI is Amazon product recommendations. Amazon learns from what you've bought in the past on its site, as well as what other users like you are interested in, and recommends other products you are likely to want to buy.

While there are literally hundreds of use cases for AI-powered personalization, they all fall under one or more of these four core applications.

Now, let's find one or more use cases for your work and business.

Amazon learns from what you've bought in the past on its site, as well as what other users like you are interested in, and recommends other products you are likely to want to buy.

How to Find AI Use Cases in Personalization

Finding AI use cases doesn't need to be rocket science. And you don't have to personalize everything with AI all at once. To start, all you have to do is figure out how AI can help improve your personalization efforts.

To do that, you'll want to start by looking at what you and your team do every day, week, month, quarter, etc. Also, list out what business objectives you and your team are trying to accomplish over these time frames.

For each of the tasks or objectives on this list, ask yourself the three questions below.

- **Is it data-driven?** Are you using a lot of data to make any decisions related to personalization? Or do you have access to a lot of data you could use to make personalization decisions? If data is used (or exists) to help you perform a task, it may be a good candidate for using AI to do it better and faster.

We're not talking about straightforward, rules-based decisioning. We're instead focused on decisioning that requires better data analysis.

Keep in mind: You'll want to look at areas where you generate a lot of data because AI often needs lots of data to function. That could include data from different locations, business units, catalogs, interaction data from your website (views, clicks, etc.), item metadata (details on new articles, products, etc.), user metadata (age, location, subscription details, etc.), or customer sources.

- **Is it repetitive?** Do you do the same thing over and over again to accomplish the task? Is there a process to accomplish the business objective that you can define steps for?

AI excels at augmenting or automating tasks that have standardized, repeatable steps. You also don't need to automate an entire repetitive task with AI. You can look at making individual steps of the process better and faster using AI.

- **Is it making a prediction?** Does your task involve trying to predict something? If you're doing personalization, you better believe it does.

Personalization is all about making predictions. Predictions about what users want to see, consume, buy, and do. And AI is uniquely suited to making predictions that are delivered in real time.

Look for predictions you try to make—or would like to make—minute-by-minute.

You don't have to answer "yes" to all three questions to have an AI use case. Answer "yes" to one or two questions, and the task is a likely use case for AI. Answer "yes" to all three questions, and it definitely is.

All you have to do is figure out how AI can supercharge select tasks you do all the time.

Top AI Use Cases in Personalization

For more ideas, look at this list of common use cases for AI in personalization that top brands are using:

- Personalize a homepage. You can match content, services, products, promotions, images, artwork, sections, categories, and results on pages to a user's preferences and behavior.
- Personalize product and content recommendations. You can match products to a user's needs, increasing sales, as well as cross-sell and upsell opportunities. You can also serve users individualized content recommendations that increase content consumption.
- Personalize recommendations based on business goals. You can rank recommendations based on the metrics you need to hit, like revenue, watch time, etc.
- Personalize recommendations to account for business rules. You can use your own business rules to automatically augment recommendations. For instance, you can do things like filter out recently watched items or make sure to highlight premium content if a user is in a particular subscription tier.
- Personalize marketing assets. You can tailor ads, emails, push notifications, and more to individual user behavior.
- Make product discovery intelligent. You can serve up smarter search results so customers find what they want faster. AI can also analyze product metadata to provide smarter product recommendations to users from your catalog.
- Recommend new items or recommend items that are trending. You can recommend specific items that are gaining popularity among users at the fastest pace.
- Create contextualized recommendations. Provide recommendations based on specific contextual factors, such as device type, location, time of day, etc.
- Personalize descriptions and reviews. You can analyze and use unstructured text to increase the relevance of these assets. You can also maximize the value of your data by unlocking information trapped in product descriptions, reviews, or other unstructured text to generate more relevant recommendations.

Additionally, you can also use AI to intelligently segment users after you've implemented it for personalization. You can segment users based on advanced similarity models that account for many factors outside of just attributes and behaviors. And you can learn what products, categories, and brands user segments prefer based on past interactions, affiliations, and topics of interest.

You Don't Have to Build It All Yourself: Use-Case Optimized Recommenders

Solutions like [Amazon Personalize](#) offer pre-built recommenders that make your work easier. Pre-built recommenders make it faster and easier to launch AI-powered personalization. They do that by offering a pre-made personalization "recipe" that you can easily launch.

You simply select the recommenders for your use cases, and Amazon Personalize does the heavy lifting of using AI to generate recommendations that you access through an easy-to-use API.

These recommenders learn from your users' historical activity, as well as their real-time interactions with items in your catalog, in order to adjust to changing user preferences and deliver immediate value to your end users and business.

Amazon Personalize offers pre-built recommenders in retail and in media and entertainment.

In retail, you can select from pre-built recommender options like:

- Most Viewed
- Best Sellers
- Frequently Bought Together
- Customers Who Viewed X Also Viewed
- Recommended For You

In media and entertainment, you can select from options like:

- Most Popular
- Because You Watched X
- More Like X
- Top Picks
- Trending Now

Amazon Personalize then uses AI to generate these types of recommendations for users via API calls. To do that, you follow a simple four-step process with Personalize:

- Add your data.
- Create a solution. (User recommendations, similar items, personalized ranking, etc.)
- Tune the recommendations according to different preferences, business rules, and business metrics.
- Access recommendations, contextualize them, and analyze performance.

It's as simple as that.

Top Personalization Use Cases by Industry

Another way to look at AI use cases for personalization is to draw inspiration for use cases by industry.

Retail

- Recommend products, upsells, and cross-sells in real time, as well as popular or similar items based on a user's past interactions.
- Increase average order value by promoting items likely to increase order size.
- Personalize search results and recommendations to increase click-through rates, reduce cart abandonments, and increase customer loyalty.



Media, Entertainment, and Sports

- Cross-promote content recommendations between media properties.
- Make more accurate content recommendations based on more user attributes and behaviors.
- Create highly personalized pre-roll, mid-roll, and post-roll ad placements in audio and video content.
- Create "Just for You" personalized content recommendations based on user preferences, as well as highlight new or trending content, movies, and shows.



See AI in Action for Media and Entertainment

The [AWS Magic Movie Machine](#) lets you experience how AI can personalize content for media and entertainment companies. In this short, interactive game, you are looking for movie recommendations that match your personal interests. See firsthand how Amazon Personalize learns what you like and then tunes your recommendations in real time.



Financial Services

- Automatically categorize transactions to deliver the right financial product at the right time to users.
- Intelligently segment users to personalize financial advice and information.
- Personalize content and offers to encourage users to complete financial transactions.
- Accelerate digital transformation by unifying financial records across disparate systems.

Professional Services

- Tailor content recommendations to individual user preferences on professional services sites.
- Personalize messaging across channels to prompt users to engage and take action.
- Make content recommendations to improve engagement in membership communities.



Manufacturing

- Personalize product recommendations to equipment buyers in specific industries and use cases.
- Personalize user experiences with websites and apps that support product lines.
- Proactively recommend content and products based on common replacement or upgrade timelines.

Healthcare

- Recommend relevant health content to users to increase time-on-page and boost engagement.
- Create personalized experiences that take into account unique health data, issues, and behaviors.
- Personalize provider communications and notifications to increase patient response rates and patient retention.



Travel and Hospitality

- Serve users the most relevant photos and reviews to increase bookings.
- Create more dynamic menus, provide better delivery options, and develop a portfolio of ancillary offers.
- Recommend experiences based on activity or destination preferences, seasonality, and trending destinations.

Software and Internet

- Personalize communications to re-engage with past or dormant customers.
- Personalize individual user experiences to specific account details, plans, and upgrade needs.
- Use intelligent product search to increase subscriber rates and upsell existing subscribers.

SaaS Solution Providers

- Create personalized retention offers based on a user's past engagement.
- Target users with highly personalized time-sensitive promotions to boost monthly recurring revenue (MRR) and annual recurring revenue (ARR).
- Create personalized trial and onboarding experiences to get users to time-to-value faster.

Top Companies Using AI for Personalization

You have a foundational understanding of AI. You have—or know how to find—use cases for AI. Now, let's look at how real brands are using real AI technology to do transformative personalization at scale.

How Bundesliga creates fan engagement with Amazon Personalize

Football is more than a sport. It's a way of life.

Bundesliga, Germany's premier football league, knows that all too well. Fans of Bundesliga's 36 clubs are rabid about watching matches, buying merchandise, following their favorite teams and players online, consuming content, reading articles, and engaging with the league's app.

Personalizing the fan experience to stoke passions and increase engagement is Bundesliga's mission. And it would be complex enough if each fan loved just one team.

But the average Bundesliga fan follows four clubs out of the 36. That creates thousands and thousands of possible individual fan profiles to cater to across multiple platforms, channels, and content types.

That's why Bundesliga turned to AI from Amazon Personalize to create an individualized, regionalized, and personalized experience for each and every fan.

The league deployed Amazon Personalize to generate individualized content for millions of active users in the Bundesliga Official App. Using Personalize, the app now recommends individualized content and notifications for each fan based on a dizzying array of personal preferences and behaviors.

Bundesliga chose Amazon Personalize because the AI made it easy to quickly deploy personalized recommendations at scale—without having to invest a ton of time and resources into building a custom solution. It also offers plenty of customization features for Bundesliga's needs and works well with the other cloud and data services they're using.

As a result of deploying Personalize, Bundesliga saw major improvements across core metrics. Each fan read 68% more articles on average per week. The average number of sessions per fan each week rose by 24%. And, on average, fans spent 18% more time in the app.

Now that's something to applaud.

Each fan read 68% more articles on average per week. The average number of sessions per fan each week rose by 24%. And, on average, fans spent 18% more time in the app.

Yelloh transforms into a modern mobile retailer with personalized communications

Yelloh delivers frozen foods directly to more than 1.5 million people annually, resulting in 7.5 million transactions each year.

Delivering trusted quality isn't anything new for Yelloh. The company used to be Schwan's Home Delivery, a company trusted by consumers for more than 70 years to deliver high-quality food right to their doors. The new name reflects the transition from trusted, old-school delivery company to modern, mobile retailer.

But that transition wasn't always easy.

As the company transitioned to a mobile-first retail approach, it struggled to create the types of meaningful, personalized customer connections via mobile that would make a real impact. That's because it required building a connected experience at scale by automating, delivering, and analyzing millions of interactions—a feat the company just wasn't equipped to accomplish on its own.

Because of that, the company's mobile retail operations were as much as 50% inefficient.

That was before Yelloh adopted Amazon Personalize.

Using Amazon Personalize and two other key AWS services, Yelloh was able to quickly deploy more intelligent product recommendations for customers and dramatically increase mobile retail operational efficiency.

With Personalize, Yelloh customers can now receive suggestions on new food items they might like, based on their previous orders and purchases from buyers similar to them. Personalize also made it easy for Yelloh to quickly take personalized recommendations like these from conception to deployment nationwide.

By coupling Personalize with Amazon Pinpoint and Amazon Connect, the company was also able to send 100,000 messages to customers letting them know a delivery truck was near them, based on their personal preferences and location.

As a result, the company received delivery commitments worth an extra \$100 million in revenue and saved another \$50 million by optimizing delivery routes based on customer responses and preferences.

That wasn't just good for profits. It was good for the planet. Yelloh's vehicle fleet is on pace to drive 10 million miles less per year due to better delivery routing.

As a result, the company received delivery commitments worth an extra \$100 million in revenue and saved another \$50 million by optimizing delivery routes based on customer responses and preferences.

ResMed uses Amazon SageMaker to personalize sleep therapy for millions

Digital health technology company ResMed had an ambitious goal:

Help improve 250 million lives per year by 2025. And if anyone should know about helping millions, it's ResMed.

The company provides continuous positive airway pressure (CPAP) devices and masks for people with sleep apnea, chronic obstructive pulmonary disease, and other sleep disorders. The equipment is cloud-connected, so it collects data on patients' sleep patterns and shares that data with patients through ResMed's myAir patient app. The app uses AI to provide patients with recommendations and coaching that produce better outcomes.

There was just one problem.

ResMed's previous AI capabilities couldn't process enough data to deliver truly personalized recommendations for millions of patients. In fact, it couldn't securely process and use the huge volumes of patient sleep data it would need to in order to hit its 2025 goal of helping 250 million people per year—roughly double the people they were helping at the time.

It needed a way to streamline and scale its AI operations—and fast.

To do that, the company turned to Amazon SageMaker. SageMaker is a fully managed service that gives data scientists and ML practitioners all the tools they need to build, train, and deploy custom models quickly.

Thanks to those capabilities, ResMed was able to quickly build a centralized, standardized AI solution that scaled globally and connected with the company's existing data storage solutions. In fact, leveraging SageMaker and AWS Data Lab, which offers joint engineering support for AWS customers, ResMed was able to roll out a prototype in two months and foundational capabilities in six months.

Today, ResMed uses SageMaker to run pre-processing, post-processing, and model evaluation workloads, as well as for training models and pipelines.

The result?

ResMed's models now deliver predictions and personalized recommendations—up to two million per day—that have supercharged how patients use the myAir app.

In the past, all myAir users would receive very similar messages from the app. But now, the app provides personalized interactions with millions of patients based on their individual contextualized data, such as the device they use and their waking hours.

AI-powered personalization isn't just better at achieving ResMed's goal. It's better at helping patients live their best lives.

ResMed's models now deliver predictions and personalized recommendations—up to two million per day—that have supercharged how patients use the myAir app.

Top AI Tools for Personalization

Ready to try out AI for yourself? AI for personalization comes in many forms. It includes not just tools but also AI recommendation engines that provide recommendations via API calls, which make it easy to integrate AI into your existing tech stack or ecosystem.

Here are eight of the leading AI solutions for personalization that you should try today.



Amazon Personalize

Amazon Personalize empowers you to quickly build and deploy an array of personalized recommendations and intelligent user segmentation at scale. It uses the same proven machine learning technology that Amazon.com has used for over 20 years on its own website.

Amazon Personalize is an API AI service that allows you to host machine learning models for recommendations and user personalization. These models can be tailored to your individual needs, and the solution is designed to easily integrate personalized recommendations into your existing websites, applications, email marketing systems, and more.

That gives anyone the ability to use AI to deliver the right customer experience at the right time and in the right place. Not to mention, Amazon Personalize customers pay only for what they use, with no minimum fees or upfront commitment. With Personalize, you can:

- Quickly implement a customized personalization engine in days—not months—with no AI expertise required.
- Personalize pages, items, products, and content based on real time user preferences and behaviors, as well as catalog metadata. You can also augment recommendations to adapt to your own business rules.
- Create contextualized recommendations. Provide recommendations based on specific contextual factors, such as device type, location, time of day, etc. Or recommend specific items that are gaining popularity among users at the fastest pace.
- Create quality recommendations for fresh items, products, and/or content using metadata when data on users is scarce. This solves “cold start” problems by allowing you to make recommendations for new items even if a user doesn’t have any interaction history or when new items are added to your catalog.
- Drive meaningful engagement by personalizing every touchpoint in the customer journey and tune personalization using advanced 1:1 targeting. That includes personalizing marketing assets like ads and emails to each and every user for maximum impact.
- Make product discovery intelligent. You can serve up smarter search results so customers find what they want faster. AI can also analyze product metadata to provide smarter product recommendations to users from your catalog.
- Personalize descriptions and reviews. You can analyze and use unstructured text to increase the relevance of these assets. You can also maximize the value of your data by unlocking information trapped in product descriptions, reviews, or other unstructured text to generate more relevant recommendations.
- Unify your data to create meaningful customer experiences across the entire user journey.

Top companies across industries use Amazon Personalize to:

1. Optimize recommendations. Automate creating and maintaining personalized recommendations.
2. Target customers more accurately. Apply AI to run more effective prospecting campaigns by segmenting users based on preferences such as product, category, and brand.
3. Maximize the value of data. Analyze unstructured text and use the information contained in it to generate better recommendations.
4. Promote items using business goals. Customize your recommendations by promoting specific items based on business goals while still ensuring the highest relevance possible.

One major benefit of Personalize is that—no matter what you use it for—you can get to market and achieve ROI quickly. You can stand up a proof-of-concept (POC) in just a few days. This is a marked difference from launching an in-house personalization solution, which can take a lot of time and resources. (Not to mention, companies often underestimate how hard it is to find and attract the talent and technical skill sets needed to train, deliver, and maintain a sophisticated personalization system.)

And don't forget: Amazon Personalize also comes with pre-built recommenders in select industries. These are pre-made personalization models for different use cases that you can deploy without building on your own.

So, who's a good fit for Amazon Personalize?

You're probably a great fit for the solution if you:

- Have a large number of users that can be segmented based on preferences or item attributes.
- Have a large catalog of items and users—more than 50 users, 50 items, and 1,500 interactions.
- Recommend items to known users.
- Recommend items to new users.

Does that sound like you?

Learn more about Amazon Personalize here and get started for free.

[GET STARTED](#)



Amazon SageMaker

If you want to create your own ML models, Amazon SageMaker provides you with all the tools you'll need in one place. Amazon SageMaker is a fully managed service that helps your data scientists and ML practitioners build, train, and deploy machine learning models quickly.

For recommendation engines, Amazon SageMaker offers built-in algorithms such as factorization machines and hundreds of pre-trained models, as well as the option to develop your own algorithms. Like Personalize, SageMaker is also built on Amazon's two decades of experience developing real-world AI applications, including product recommendations and personalization.

SageMaker enables high-performance, low-cost machine learning at scale in a number of ways. With it, you can:

- Enable more people to innovate with machine learning through a choice of tools—integrated development environments (IDEs) for data scientists and no-code interfaces for business analysts.
- Access, label, and process large amounts of structured data (tabular data) and unstructured data (photo, video, geospatial, and audio) for machine learning.
- Reduce training time from hours to minutes with optimized infrastructure. Boost team productivity up to 10 times with purpose-built tools.
- Automate and standardize machine learning practices and governance across your organization to support transparency and make it easier to audit practices.

Through features like Canvas, SageMaker also gives you the ability to generate accurate AI-powered predictions—without code. With Canvas, business analysts can use a visual interface to generate these predictions on their own without any previous AI experience or having to write any type of code.

In just a few clicks, you can import data, select what you want to predict, automatically prepare the data, and build an AI model to start making predictions. That means anyone on your team can use Canvas to build predictive personalization models that move your business forward.

Ready to start building your own personalization models?

Learn more about Amazon SageMaker.

[LEARN MORE](#)



[Airship](#) offers a suite of tools that helps brands create better personalized mobile experiences through smarter push notifications, content, and analytics. Core to Airship's personalization features is its Mobile Data Hub product. And Mobile Data Hub relies on predictive AI to enable truly personalized mobile experiences.

With Mobile Data Hub's AI, you can predict the optimal send time to reach customers based on their behavior. You can also predict which customers are most likely to churn. The result is a smarter, AI-powered mobile experience that customers love.



[Dynamic Yield](#) is an experience platform that uses deep learning (an advanced type of AI) to personalize your customer experience to each individual consumer.

The platform's AI-powered product recommendations suggest the most relevant offers for each individual based on shopping behavior. Thanks to the AI's self-learning capabilities, Dynamic Yield's platform also continuously optimizes and improves its recommendations using customer data. And its pre-configured models make it easy to get up and running quickly.



[Mutiny](#) is a no-code AI solution that allows you to personalize your website by just pointing and clicking. This makes it quick and easy to roll out personalization changes and experiments without developers.

You can use these capabilities to better personalize your website for individual visitors. You can also create personalized landing pages for account-based marketing (ABM) campaigns. And you can even personalize landing pages for paid ads at scale, so every ad has its own page.

[PERSADO]

AI platform [Persado](#) allows you to automatically personalize each and every message to an individual user's preferences.

Persado's AI actually knows what type of language a user prefers. Then, it adjusts your content to make it maximally appealing to that individual. And it does it at scale across your entire audience.

That means each message you send across content, copy, and ads is the exact right message with the highest chance of motivating a user to take action.

rasa.io

With [rasa.io](#), you can send personalized smart newsletters that are tailored to each and every prospect's individual content preferences.

Using AI, rasa.io evaluates how each user engages with content in your email newsletter. Then it customizes future newsletters to deliver more of the content an individual prefers, making it more likely they'll open and engage with your email.

That means you can automatically nurture your newsletter subscribers with value-driven content personalized on a one-to-one basis.

SAILTHRU

[Sailthru](#) is a cross-channel personalization solution that uses AI in a variety of contexts to tailor engagements across web, mobile, SMS, email, and more.

With AI from Sailthru, you can:

- Predict when consumers are most likely to visit your site or buy from you, then proactively engage with them to maximize the likelihood of conversion.
- Deliver messages at the exact times when consumers are most likely to open, click, and engage with them.
- Use consumer behavioral data to make predictions that help you increase the number of customers you acquire and decrease the costs to acquire them.
- Hyper-personalize content and products to customers based on their interests and behaviors.

Why Personalization of the Future Depends on AI

You've seen first-hand how AI for personalization can transform businesses across many industries.

Now, it's up to you to capitalize on the opportunity to use AI for personalization.

If you don't, you face an existential threat from competitors who do. That's because consumers reward the levels of personalization that are only possible with AI.

According to [Twilio's 2022 State of Personalization report](#), a full 62% of consumers say a brand will lose their loyalty if it delivers an un-personalized experience, up from 45% who said this in 2021.

This represents a huge competitive advantage for brands that do personalization right—because not enough are.

Today, Twilio also finds that only 35% of companies feel they're achieving omnichannel personalization. And only 47% actually personalize communications based on real time customer behavior.

You don't have to be one of the companies left behind.

Using the contents of this blueprint, you can quickly, easily, and profitably start using AI for personalization right now.

The only question left to answer is:

What are you waiting for?

Consumers reward the levels of personalization that are only possible with AI.

About Marketing AI Institute

Marketing AI Institute is a media, event, and education company founded in 2016 that makes AI approachable and actionable for marketers and business leaders. The Institute owns and operates the Marketing Artificial Intelligence Conference (MAICON) and AI for Writers Summit, hosts The Marketing AI Show podcast, runs the AI Academy for Marketers featuring dozens of on-demand courses, and published *Marketing Artificial Intelligence: AI, Marketing, and the Future of Business* (Matt Holt Books, 2022). Learn more at www.marketingaiinstitute.com.

About Amazon Web Services (AWS)

Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted cloud platform, offering over 200 fully featured services from data centers globally. Millions of customers — including the fastest-growing startups, largest enterprises, and leading government agencies — are using AWS to lower costs, become more agile, and innovate faster. To learn more about AWS, visit aws.amazon.com.