**AI recommendation on Amazon**

**Introductions:**

In this study, you will answer some questions about AI recommendation systems in e-commerce. You will watch ***five videos about AI recommendation systems on Amazon***, and then fill in some tables and answer some questions. ***Each video lasts about 2 minutes.*** ***In the first video,*** you will watch a brief instruction about AI recommendation systems on in e-commerce. ***In the other four videos,*** you will watch videos about AI recommendation features on Amazon including homepage, search page, product page, and cart page on Amazon. Following the videos, you will fill in tables.

**Pre-tasks:** Please answer the following two questions and watch the first video

***Q1: Please briefly introduce yourself (e.g., Education and Work experience; no need to include your names or other privacy information)***

***Answer: I have undergraduate degree and MBA from Alabama. I used to work at Farmers and Wells Fargo. I am in MS of Computer Information System program in West Texas.***

***Q2: How many times did you shop on Amazon during the past three months?***

***Answer: It was only three times.***

***Watch the video: An introduction to AI recommendation systems on in e-commerce***

***Link:*** <https://drive.google.com/file/d/1fQXu9Iir8_MIfUW-3j7K3iGf0V_iSOlP/view?usp=share_link>

***After you watch the above video, you may move forward to following tasks:***

**Task #1 Read the following and understand the concept of technology affordance**

***Technology affordance*** is defined as “the mutuality of actor intentions and technology capabilities that provide the potential for a particular action” (Majchrzak et al., 2013, p. 39). *In other words,* technical features of IT provide users the opportunity to take actions and achieve their goals. ***For example,*** Facebook has features such as *“sharing my own photo”* and *“updating my new status*”, which allow us to present ourselves in Facebook, thus can achieve the goal of self-presentation. **For another example,** Facebook has technical features, Like and comment, which allow you to follow others and interact with others, and thus developing social relationships and understanding others better. ***The following table summarizes these features and affordances.***

|  |  |  |
| --- | --- | --- |
| **Features of Facebook** | **Allow you to do:** | **The outcome or goal of the actions:** |
| “Sharing my own photo” & “Updating my new status | Present myself in Facebook | **Self-presentation** |
| “Like and comment” | Follow others,  interact with others, | **Developing social relationships;**  **Maintain social relationships** |

**Task #2 Watch this video: AI products recommendation on home page (Amazon)**

**Link:** <https://drive.google.com/file/d/1nBCcX6_-d0nMQ2sQ_PvLXSDNocmpw8i3/view?usp=share_link>

**Participants:** Now you understand the technical features of AI products recommendation on Amazon home page. ***Please go to*** [***www.amazon.com***](http://www.amazon.com) ***and login your own Amazon account (if any). And then, please review your own home page and fill in Table 1 following the guidance below.***

For example, as explained in the video, you may see the first feature of AI recommendation on Amazon home pages (See the first row in the following table 1): **Item 1:** E-commerce displays recommended products based on my browsing history (e.g., you may see products in “Recommended based on your browsing history” or “Related to items you have viewed” or “Your Browsing History”**). In your own amazon accounts**, you may see one or two of the three blocks, or you may all of the three blogs, because AI recommendations will change from person to person.

For example, in the video, you may see products in the block “Your browsing history”



When you login your own account, you will see **different products in this block**, because AI recommend products based on your profiles, searching data, and so on. This will apply to all blocks in all the five videos. Therefore, you will need to review products carefully in the blocks that you can see in your account and fill in the tables.

(***Note,*** if you do not have an amazon account, you may continue this study).

***Guidance:***

* ***First,*** in the column “***Main features of AI product recommendation on homepage***”, we list the primary AI technical features. ***You may review these features on your own Amazon home page.***
* ***Second,*** in other two columns ***(“Allow me to do” & “The outcome”),*** you may write what you can do with those features and the corresponding outcomes. *(Note: You may write as many as you can. It is common one technical feature may allow you to do multiple things and have multiple outcomes. It is also common that multiple techniques may lead to one same action and outcome)*
* **Third,** in the last column “Explanation”, you may explain why you think this way.
* **In the first row of the following table, you may see an example.** If you agree with it, you may keep it. Otherwise, you may delete it or revising it or add more.

**Table 1 Technology affordances of AI product recommendation on Amazon Homepage**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | **Main features of AI recommendation on home page** | **Allow me to do:** | **The outcome** | **Explanation** |
| **1** | **Item 1:** E-commerce displays recommended products based on my browsing history (e.g., you may see products in “Recommended based on your browsing history” or “Related to items you have viewed” or “Your Browsing History”) | Review my recently searched or viewed products; | Make my shopping easier | I see a lot of products recommended based on my recent shopping activities. I may easily continue my shopping. I may also easily choose a product that I am interested in. So, my shopping is much easier. |
| **2** | **Item 2:** E-commerce displays recommended products based on my shopping history (e.g., you may see products in “Gift ideas inspired by your shopping history” or “Inspired by your purchase of the product” or “Similar to your past purchase” or “more items to consider”) | Discover new products based on my past purchases; | Discover new products that align with my interests | The AI recommendation allows me to explore new products that are related to my past purchases, helping me discover products that align with my interests and preferences. |
| **3** | **Item 3:** E-commerce displays more related products that attract my interests (e.g., you may see “more items to explore” or “Trending deals”) | Explore more products based on my interests; | Discover trending deals and products | The AI recommendation allows me to explore more products that are aligned with my interests and preferences, helping me discover trending deals and products that I may be interested in. |
| **4** | **Item 4:** E-commerce display related products that I may re-purchase (e.g., you may see “frequently repurchased” items or “buy it again”) | Easily re-purchase products; | Convenient re-purchasing experience | The AI recommendation displays products that I have previously purchased and may want to re-purchase, making it convenient for me to quickly re-purchase products that I have liked or used before. |
|  |  |  |  |  |

**Task #3 Watch this video: AI products recommendation on search page**

**Link:** <https://drive.google.com/file/d/1QEG82vIUfti1ShEETlvUJ9V24RQwwiTY/view?usp=share_link>

**Participants:** You have reviewed the home page on amazon. Please search a product and fill in the following table (Table 2) based on the guidance.

* If you happen to have something that you want to buy. You may search the product you want to buy and let us know **what you search:** \_\_\_\_\_\_\_\_\_\_\_\_ (please input)
* If you do not have anything to buy, ***you may search any products you like such as coffee, iPad case, monitor, and any other products***.

***Guidance:***

* **First, please perform your search**, which will retrieve a lot of relevant products as the results.
* ***Second,*** in the column “***Main features of AI product recommendation of search results***”, we list the primary AI technical features in search results. ***You may review these features in your own search results.***
* ***Third,*** in other two columns ***(“Allow me to do” & “The outcome”),*** you may write what you can do with those features and the corresponding outcomes as you have done similar tasks in the previous table.
* **Third,** in the last column “Explanation”, you may explain why you think this way.
* **In the first row of the following table, you may see an example.** If you agree with it, you may keep it. Otherwise, you may delete it or revising it or add more.
* Last, you may add more rows if you see other features.

**Table 2 Technology affordances of AI product recommendation of search results**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Main features of AI recommendation of search results** | **Allow me to do:** | **The outcome** | **Explanation** |
| **1** | **Item 1** E-commerce displays popular keywords trends in the search box | Use some popular key words;  Know the best search words; | Easily search products; | This feature provides me with some good options that can help improve my search, so it helps improve my shopping outcomes |
| **2** | **Item** 2 E-commerce displays the most related results following my search | View products that are most relevant to my search; | Find relevant products quickly; | This feature shows me the most related products based on my search query, helping me to find products that closely match my requirements without having to manually sift through numerous search results. |
| **3** | **Item 3** E-commerce displays highly rated products following my search (e.g., you may see products in “top features from customer reviews” or “Based on the star rating and number of customer ratings”) | View highly rated products;  Identify popular products with positive reviews; | Find products with good quality and customer satisfaction; | This feature displays highly rated products based on customer reviews, helping me to identify popular products with positive feedback. This can assist me in making informed purchase decisions and selecting products of higher quality. |
| **4** | **Item 4:** E-commerce marks the best seller / choice following my search (e.g., you may see products featured as “best seller” or “Amazon choices”) | View best seller or recommended products;  Identify popular products based on sales or recommendations; | Discover popular and trusted products; | This feature highlights best-selling or recommended products based on sales or recommendations, helping me to identify popular and trusted products that are in high demand among other customers. This can give me confidence in the product's quality and popularity. |
| **5** | **Item 5:** E-commerce displays similar products from brands related to my search (e.g., you may see products in “Brands related to your search”) | View products from related brands;  Discover similar products from different brands; | Explore options from different brands; | This feature displays similar products from different brands that are related to my search query, helping me to explore options from various brands and make comparisons based on features, prices, and reviews. This can broaden my choices and help me find the best fit for my needs. |
| **6** | **Item 6:** E-commerce suggests keywords for my product search (e.g., you may see “related searches” or “customers also search”) | Explore related search keywords;  Discover alternative search terms; | Improve search accuracy and relevance; | This feature suggests related search keywords or alternative search terms based on my search query, helping me to explore related options and improve the accuracy and relevance of my search results. This can enhance my search experience and help me find products that closely match my requirements. |
|  |  |  |  |  |

**Task #4 Watch this video: AI products recommendation on the product page**

**Link:** <https://drive.google.com/file/d/1jCI9ycPRdbFvikhh6Skb1KZot0HKYxjw/view?usp=share_link>

**Participants:** **Now, please click a particular product,** which will direct you to the particular product page. And then, you may review product page and fill in the following table (table 3) as you have done in the last task.

***Instructions:***

* ***First,*** in the column “***Main features of AI product recommendation of the product page***”, we list the primary features. You may review these features on your own product page carefully.
* ***Second,*** in other two columns ***(“Allow me to do” & “The outcome”),*** you may write what you can do with those features and the outcome. *(Note: You may write as many as you can)*
* **Third,** in the last column “Explanation”, you may explain why you think this way.
* Last, you may add more rows if you see other features.

**Table 3 Technology affordances of AI product recommendation on the product page**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Main features of AI recommendation** | **Allow me to do:** | **The outcome** | **Explanation** |
| **1** | **Item 1:** E-commerce displays highly rated products for the current browsing product (e.g., you may see products in “4 stars and above” or “highly rated brands in this category”) | View highly rated products; Make informed purchasing decisions; | Choose products with good customer ratings. | This feature allows me to easily identify highly rated products, which can help me make informed purchasing decisions and choose products with good customer ratings for better product satisfaction. |
| **2** | **Item 2:** E-commerce displays similar products that are worth comparing with (e.g., you may see products in “compare with similar items” or “Customers who searched for ‘the product’ ultimately bought” or “More from frequently bought brand”) | Compare similar products; Explore alternative options; | Discover related products from frequently bought brands. | This feature allows me to compare similar products, explore alternative options, and discover related products from frequently bought brands, which can help me make informed decisions and find the right product that meets my needs and preferences. |
| **3** | **Item 3:** E-commerce displays more related products for my consideration (e.g., you may see “from the vendor”, “from the manufacturer”, and “from the brand”) | View more related products; Discover additional options from different sources; | Explore variety from different vendors, manufacturers, or brands. | This feature allows me to view more related products and discover additional options from different sources such as vendors, manufacturers, or brands. It helps me explore variety and options, which can enhance my shopping experience and provide more choices. |
| **4** | **Item 4:** E-commerce displays more related products for bundling (e.g., you may see products in “Frequently bought together” or “Buy it with” “or “Make it a bundle” or “Related products with free delivery on eligible orders”) | Discover products for bundling; View products that are commonly purchased together; | Find related products with free delivery options. | This feature allows me to discover products that are commonly purchased together, view products for bundling, and find related products with free delivery options. It helps me save time by finding related products in one place and can also provide cost savings or convenience through bundled offers or free delivery options. |
| **5** | **Item 5:** E-commerce displays more related products based on my browsing and purchase history (e.g., you may see “Based on your recent views” or “Your browsing history” or “similar to your past purchases” or “product related to this item”) | View personalized product recommendations; Discover products based on my preferences and browsing history; | Get tailored suggestions for products of interest. | This feature provides personalized product recommendations based on my browsing and purchase history, allowing me to discover products based on my preferences and interests. It enhances my shopping experience by providing tailored suggestions and recommendations that are relevant to my needs and preferences. |
|  |  |  |  |  |

**Task #5 Watch this video: AI products recommendation on the Cart page**

**Link:** <https://drive.google.com/file/d/1AMuiXI28Q0MVMmNv0QaZfDuo7GjGz7Jb/view?usp=share_link>

**Participants:** **Now, please click “Add to Cart”,** which will add the product to your shopping cart. And then, **click the “Cart”** on the top right corner, which will direct to your cart page. You may review your cart page and fill in the following table (table 4).

***Instructions:***

* ***First,*** in the column “***Main features of AI product recommendation of the cart page***”, we list the primary features. You may review these features on your own care page carefully.
* ***Second,*** in other two columns ***(“Allow me to do” & “The outcome”),*** you may write what you can do with those features and the outcome. *(Note: You may write as many as you can)*
* **Third,** in the last column “Explanation”, you may explain why you think this way.
* Last, you may add more rows if you see other features.

**Table 4 Technology affordances of AI product recommendation on the cart page**

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| --- | --- | --- | --- | --- |
| # | **Main features of AI recommendation on the cart page** | **Allow me to do:** | **The outcome** | **Explanation** |
| 1 | **Item 1:** E-commerce displays related items based on my browsing / purchase history (e.g., you may see “buy it again” or “your Browsing History”) | Easily repurchase items I have bought before. | Streamline the checkout process by suggesting items I am likely to repurchase based on my browsing and purchase history By analyzing my browsing and purchase history. | The AI recommendation system can suggest items that I have bought before, making it convenient for me to repurchase them without having to search for them again. This can save time and effort during the checkout process. |
| 2 | **Item 2:** E-commerce displays related items to products in my cart (e.g., you may see “Products related to items in your cart” or “your recently viewed items) | Discover complementary or additional items that go well with products in my cart. | Encourages upselling and cross-selling opportunities for the retailer By analyzing the products in my cart. | The AI recommendation system can suggest related items that complement or go well with the products I am planning to purchase. This can help me discover additional items that I may be interested in and can potentially lead to upselling and cross-selling opportunities for the retailer. |
| 3 | **Item 3:** E-commerce displays related items based on shopping trends (e.g., you may see “Recommended based on your shopping trends” or “Inspired by brands you shopped for” or “You might be looking for”) | Discover new products or trends based on my shopping patterns. | Stay up-to-date with the latest products and trends in the market By analyzing my shopping patterns and trends. | The AI recommendation system can suggest new products or trends that I may be interested in. This can help me stay up-to-date with the latest products and trends in the market, and discover new items that I may not have come across otherwise. |
| 4 | **Item 4:** E-commerce displays related items based on other customers’ shopping activities (e.g., you may see “Customers Who Bought Items in Your Recent History Also Bought” or “Customers who viewed items in your browsing history also viewed” or “More items to explore” or “you might be looking for”) | Discover popular or trending items among other customers. | Get recommendations based on collective shopping behavior of other customers By analyzing the shopping activities of other customers. | he AI recommendation system can suggest popular or trending items that other customers with similar browsing or purchase history have shown interest in. This can help me discover items that I may not have considered before, based on the collective shopping behavior of other customers. |
|  |  |  |  |  |

**Task #6:** Now you have some solid understanding about technology affordances of AI product recommendations on Amazon. Recall you shopping experience and think about ***the impacts of AI recommendations on your shopping***. You may talk anything about how AI product recommendations affect your online shopping, such as your perceptions of Amazon, your shopping experiences, purchase decisions, your willingness to buy, shopping outcomes, and so on. ***The following questions are used to help you explore the impacts of AI recommendations. Please explain why! (Note: please write as more and detailed as you can)***

Answer: AI product recommendations on Amazon can positively impact my perceptions of the platform. When Amazon's AI recommendation system suggests relevant and personalized product recommendations based on my browsing and purchase history, it shows that the platform understands my preferences and caters to my individual needs. This can enhance my perception of Amazon as a customer-centric platform that offers a personalized shopping experience. AI product recommendations can greatly enhance my shopping experience on Amazon. By suggesting related items based on my browsing and purchase history, shopping trends, and other customers' shopping activities, the AI recommendation system can help me discover new products, find complementary items, and make informed purchase decisions. This can save me time and effort in searching for products, and provide a convenient and efficient shopping experience. AI product recommendations can influence my purchase decisions on Amazon. When the AI system suggests relevant and appealing products based on my preferences, it can create a sense of urgency and impulse to buy. Moreover, if the recommendations are backed by social proof, such as items that other customers with similar browsing or purchase history have bought, it can increase my trust in the product and encourage me to make a purchase decision. AI product recommendations can positively impact my willingness to buy on Amazon. When the recommendations are relevant, personalized, and aligned with my preferences, it can increase my confidence in the product and make me more willing to buy. Additionally, if the recommendations highlight discounts, promotions, or limited-time offers, it can create a sense of urgency and further motivate me to make a purchase. I product recommendations can impact my shopping outcomes on Amazon. When the recommendations are accurate and relevant, it can lead to successful purchases and increase my satisfaction with the shopping experience. On the other hand, if the recommendations are irrelevant or repetitive, it can lead to frustration and dissatisfaction, and may result in abandoned purchases or negative feedback. Overall, AI product recommendations on Amazon can have a significant impact on my online shopping experience, from enhancing my perceptions of the platform, improving my shopping experiences, influencing my purchase decisions, and affecting my willingness to buy and shopping outcomes. When done effectively, AI product recommendations can provide a valuable and personalized shopping experience that meets my individual needs and preferences.

If you have any negative opinions about AI recommendation, please write down:

Answer: Privacy concerns: AI recommendation systems often rely on collecting and analyzing vast amounts of user data, including browsing history, purchase history, and other online activities. This can raise concerns about privacy and data security, as users may feel uncomfortable with their personal information being used for targeted recommendations. Bias and lack of diversity: AI recommendation systems may inadvertently reinforce existing biases or lack diversity in product recommendations. For example, if the system primarily relies on popular products or past user behavior, it may result in a narrow set of recommendations that may not cater to diverse interests or needs of users, leading to potential homogenization of choices. Overreliance on AI recommendations: There is a risk of users becoming overly reliant on AI recommendations and not actively exploring other options or making independent purchase decisions. This may result in a limited exposure to a variety of products and potentially missing out on unique or niche products that may not be captured by the recommendation algorithm.

Repetitiveness or irrelevance: AI recommendation systems may sometimes generate repetitive or irrelevant recommendations, which can be frustrating for users and diminish the overall shopping experience. Inaccurate or irrelevant recommendations may not meet users' preferences or needs, leading to potential dissatisfaction or abandonment of purchases. Manipulative techniques: Some AI recommendation systems may use manipulative techniques, such as displaying fake reviews or artificially boosting certain products, to influence users' purchasing decisions. This can lead to misleading or biased recommendations, impacting users' trust and confidence in the system. It's important to note that these concerns can vary depending on the design and implementation of the AI recommendation system. It's essential for e-commerce platforms to be transparent, ethical, and responsible in their use of AI for product recommendations, addressing these concerns to ensure a positive and trustworthy shopping experience for users.

**Task #7:** Please answer the following questions.

**Q1: Is AI product recommendation good fit for your online shopping? If yes, please explain why?**

Answer: Yes. AI product recommendations can be a good fit for my online shopping. This is because AI recommendations can offer personalized and relevant product suggestions based on my browsing and purchase history, shopping trends, and other customers' activities. This can save time and effort for me in searching for products, and potentially lead to the discovery of new items or brands that align with their interests and preferences. AI recommendations can also enhance the overall shopping experience by providing tailored suggestions that are more likely to meet my needs and preferences, potentially leading to increased satisfaction and loyalty.

**Q2: Do you have any other comments or concerns?**

Answer: None.

**Thank you very much for participating.**