

Product is in a pre-release state and might change or have limited support. For more information, see the [product launch stages](#) (</products/#product-launch-stages>).

This page describes how you record user events. Recommendations AI uses real-time user events to generate next-item recommendations. Recording as many types of user events as possible with valid product information increases the recommendation quality.

For details about user events, including user event types and sample JSON for all types, see [User events](#) (</recommendations-ai/docs/user-events>).

Before recording user events, you should have the following items in place:

- A Google Cloud project created, with authentication set up and a valid API key.  
For more information, see [Before you begin](#) (</recommendations-ai/docs/setting-up>).
- A complete, validated set of catalog information imported to Recommendations AI.

Recommendations AI attempts to join recorded user events with metadata from the product catalog when the user event is created, and only successfully joined events are recorded. If an event refers to an item that doesn't exist in the catalog, it is discarded or not associated with the correct products. Similarly, if you import user events from the past, the catalog must include any products they reference; you can mark older products as `OUT_OF_STOCK` rather than removing them from the catalog.

Recommendations AI requires high-quality data to make high-quality predictions. If your data is incomplete or incorrect, the quality of your predictions suffers.

When you record user events, ensure that you implement the following best practices:

- Always import your catalog information before recording user events, and keep your catalog information up to date.

When you record user events, the catalog item included in the user event is connected with your current catalog. If you record an event for a catalog item that is not in the current catalog, it cannot be used by Recommendations AI for training your models. This is called an "unjoined" event. Having a few unjoined events is expected. However, if the percentage of unjoined events reaches 5% or more of your total user events, make sure your catalog is up to date and investigate why the unjoined events are being created.

You can see your unjoined events by using event filtering. [Learn more](#) (/recommendations-ai/docs/manage-user-events#filter).

- Make sure that you provide as much information with your user events as possible.

Each user event type has different information that is required and accepted. For more information, see [User events](#) (/recommendations-ai/docs/user-events).

- [Set up alerts](#) (/recommendations-ai/docs/monitor) so that you will know if your user event recording processes experience any outages.
- For a bulk user event import, limit the size of the data you are importing.  
The size of each file must be 2 GB or smaller. You can include at most 100 files in a single import request. One approach is import only the user events for one day at a time.
- After a bulk import, review your [error reporting](#) (/recommendations-ai/docs/error-reporting) to ensure that your data was imported correctly.
- When importing user event data, include an accurate timestamp for each user event and avoid importing sequential user events with identical timestamps.

Provide the timestamp in the [eventTime](#)

(/recommendations-ai/docs/reference/rest/v1beta1/projects.locations.catalogs.eventStores.userEvents) field in the format specified by [RFC 3339](#) (<https://tools.ietf.org/html/rfc3339>).

- If you have imported user events that are incorrect, talk to your Recommendations AI contact about how to correct the problem.

You can record a user event in multiple ways:

- By using a JavaScript pixel.

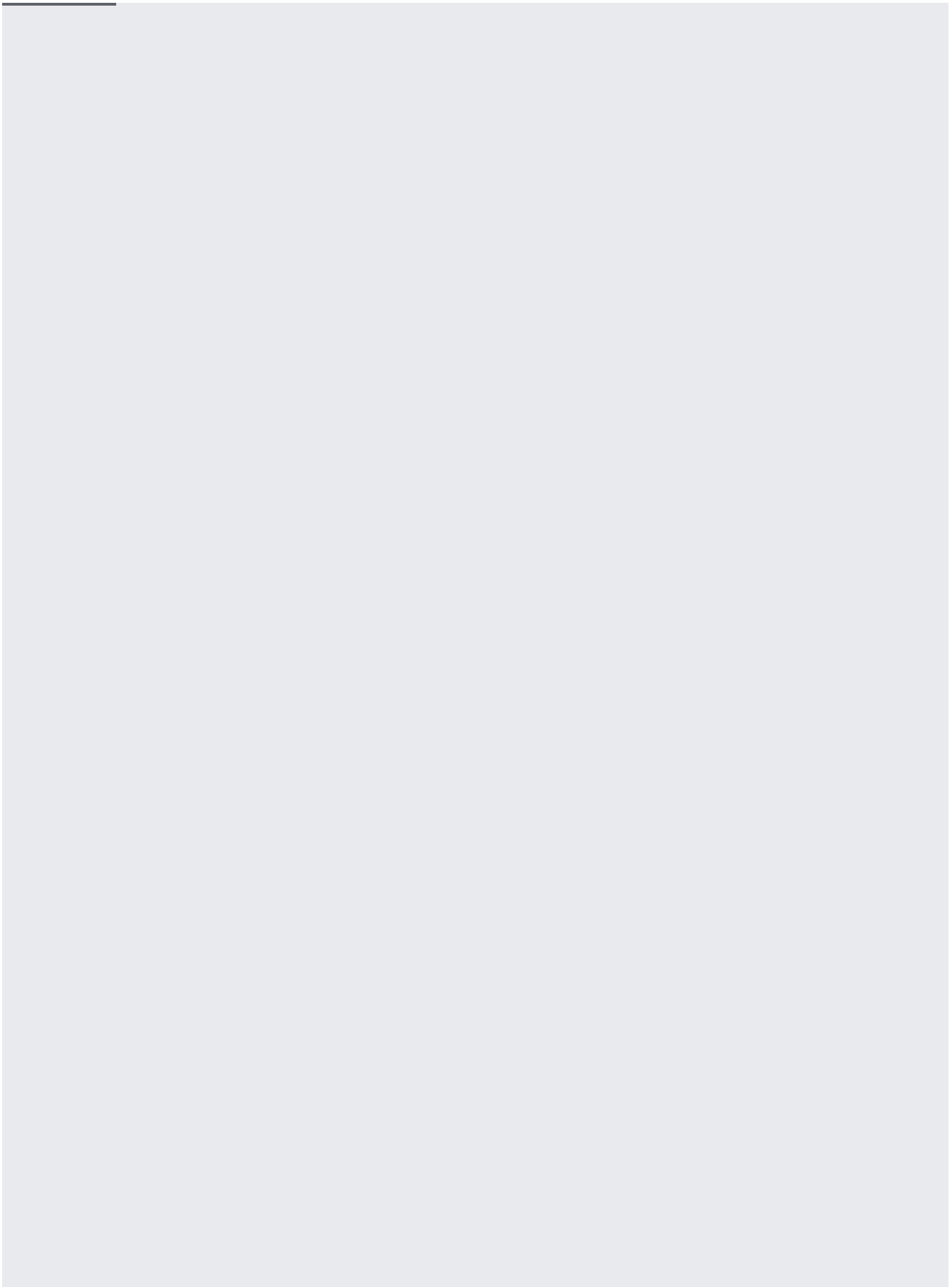
- By using a [Tag Manager](https://developers.google.com/tag-manager/) (<https://developers.google.com/tag-manager/>) tag.
- By sending events directly to the API from your back-end server.

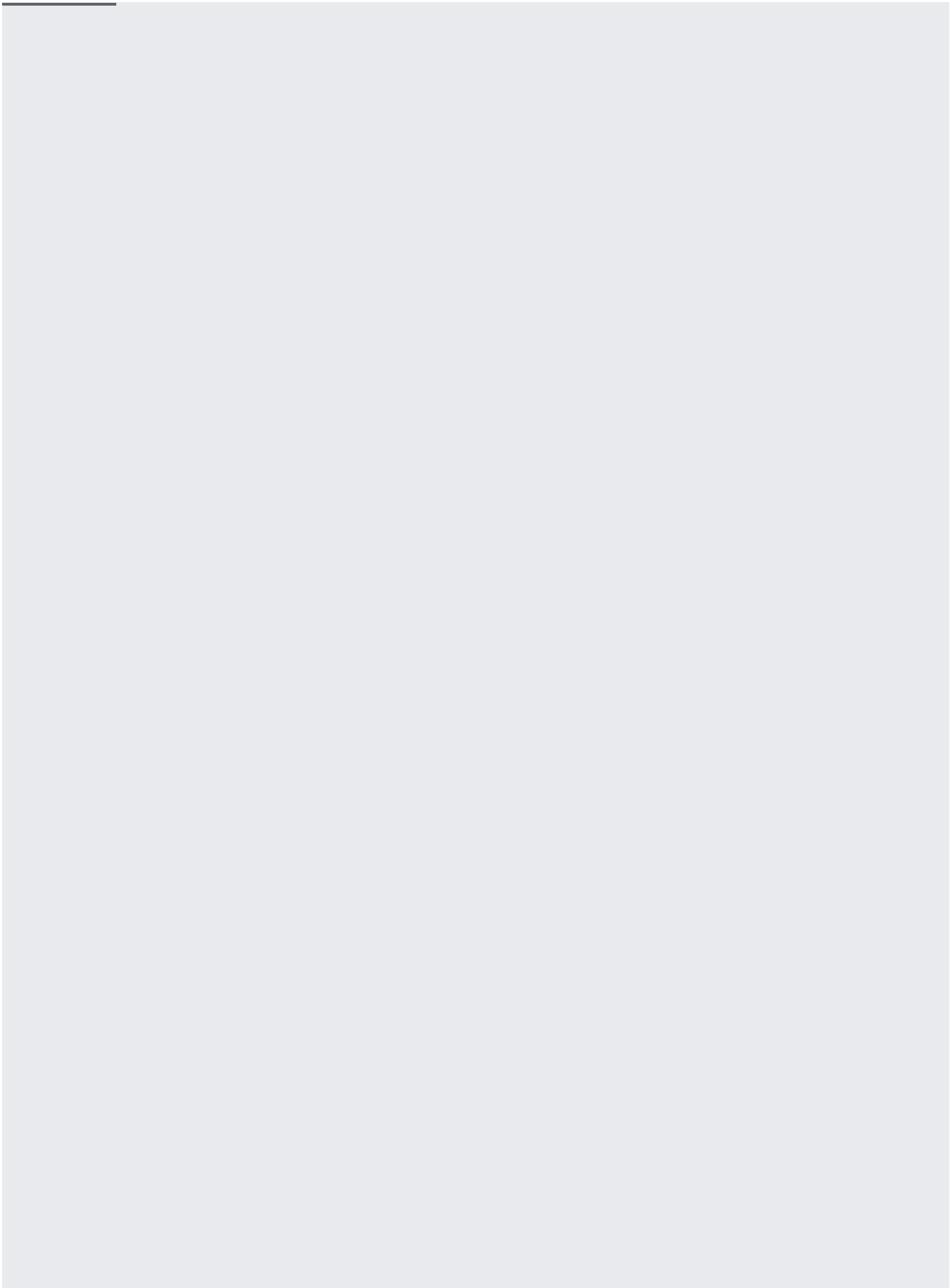
You can find examples of recording user events of type [detail-page-view](/recommendations-ai/docs/user-events#detail-page-view) (</recommendations-ai/docs/user-events#detail-page-view>) for all of these methods below. For other event types, see [User events](/recommendations-ai/docs/user-events) (</recommendations-ai/docs/user-events>).

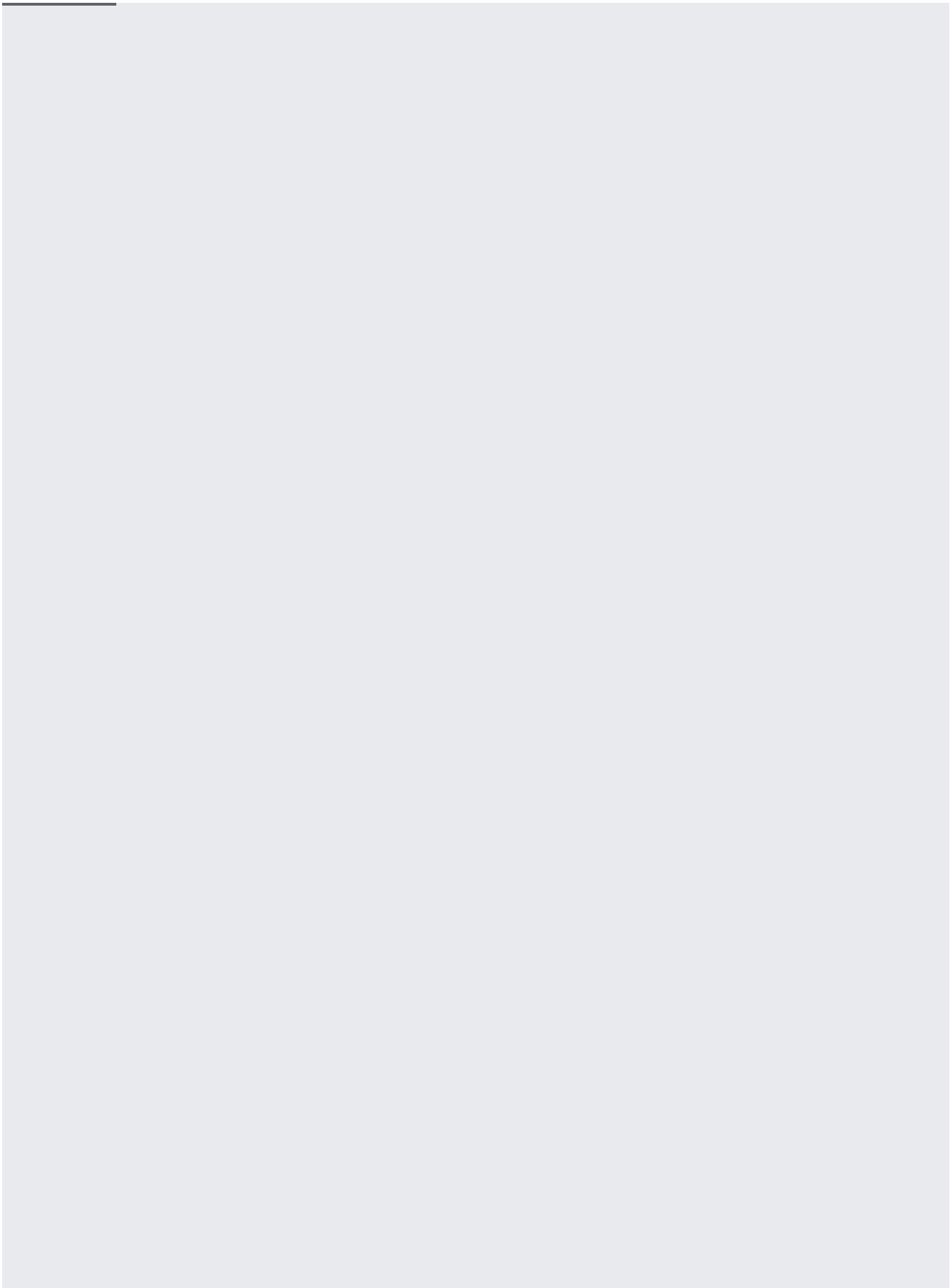
You can also import user events in bulk. [Learn more](/recommendations-ai/docs/manage-user-events#import) (</recommendations-ai/docs/manage-user-events#import>).

If the user event you are recording is the first time a user is interacting with a product based on a previously provided recommendation, including a recommendation token enables Recommendations AI to provide [recommendation performance metrics](/recommendations-ai/docs/recommender) (</recommendations-ai/docs/recommender>), but the recommendation token is optional. For information about how to work with recommendation tokens, see [Recommendation tokens](/recommendations-ai/docs/recommendation-tokens) (</recommendations-ai/docs/recommendation-tokens>).

For more information about the `userInfo` field, see [About the user information object](/recommendations-ai/docs/user-events#user-information) (</recommendations-ai/docs/user-events#user-information>).







Recording user events successfully is important for getting high-quality recommendations. You should monitor the event recording error rates and take action if needed. For more information, see [Setting up alerts for data upload issues \(/recommendations-ai/docs/monitor\)](/recommendations-ai/docs/monitor).

- Learn more about [user events \(/recommendations-ai/docs/user-events\)](/recommendations-ai/docs/user-events).
- Learn about [importing and managing user events \(/recommendations-ai/docs/manage-user-events\)](/recommendations-ai/docs/manage-user-events).
- [Start getting predictions \(/recommendations-ai/docs/predict\)](/recommendations-ai/docs/predict).
- [Monitor \(/recommendations-ai/docs/monitor\)](/recommendations-ai/docs/monitor) and [troubleshoot \(/recommendations-ai/docs/error-reporting\)](/recommendations-ai/docs/error-reporting) your data upload processes.