**Amazon Personalize – Next Best Action (NBA)**

**✅ Overview**

This project implements a real-time **Next Best Action (NBA)** system using **Amazon Personalize**, designed to provide personalized user actions such as product recommendations, marketing offers, or engagement prompts.

It uses:

* **Action Interactions dataset** → Logs how users interact with actions (e.g., *viewed*, *taken*, *not taken*)
* **Actions metadata dataset** → Describes the available actions and their properties
* An advanced **aws-next-best-action** recipe
* **Required Datasets**
* You must create and import the following **5 datasets** into your **custom dataset group**.

| **Dataset Type** |
| --- |
| **Interactions** |
| **Users** |
| **Items** |
| **Actions** |
| **Action Interactions** |

#### Allowed event\_type for Action Interactions:

* "Viewed"
* "Taken"
* "Not Taken"

# User Personalization with Amazon Personalize

This project sets up a **real-time recommendation system** using the **User-Personalization** recipe in Amazon Personalize to suggest the most relevant products, content, or actions based on user interaction history.

## 🧠 What is User Personalization?

**User Personalization** is a domain-agnostic recipe in Amazon Personalize that automatically selects the best algorithm (through AutoML) to deliver ranked recommendations **specific to each user**, factoring in their behavior, preferences, and contextual data.

**Use Cases**

* Recommending products to returning users
* Personalized homepage layout or call-to-actions
* Dynamic “For You” or “Recommended” feeds
* Email marketing personalization