**Use Case: 5**

**Domain:** Ecommerce (Amazon)

**Objective:**

How Amazon uses AI to dominate Ecommerce

**Data:**

1. **User Behaviour Data:** Amazon collects vast amounts of data related to user interactions with its platform. This includes browsing history, search queries, products viewed, items added to cart, and purchase history. Each of these actions is timestamped and associated with a user's unique identifier.
2. **Product Data:** Amazon maintains a comprehensive database of products, including product descriptions, images, pricing, and customer reviews. This data is essential for understanding the characteristics and attributes of each item.
3. **User Profile Data:** Amazon encourages users to create profiles, providing additional information such as demographic details, location, and user-generated content, such as wish lists and ratings.
4. **Machine Learning Models**: Amazon employs a variety of machine learning algorithms, including collaborative filtering, matrix factorization, and deep learning models like neural collaborative filtering (NCF). These models analyse the vast dataset mentioned above to make personalized product recommendations.

**Methods:**

**Product Recommendations:** Amazon uses your buying history, search history, time spent searching for a product, and many other factors to provide personalized product recommendations to their customers.

**User Based Advertising:** Amazon uses your data to identify your interests and show ads about the product and services based on your interests. It helps businesses reach their target customers and helps Amazon to generate revenue from its user base.

**Faster Shipping Process:** Amazon identifies the buying habits of each customer. This helps identify the locations with the most frequent buyers and employ more delivery partners in such areas. Having more delivery partners in areas with the most frequent orders helps Amazon to make the shipping process faster.

**Customer Service:** Amazon's virtual assistant, Alexa, uses AI to provide quick and accurate answers to customer questions. Alexa is integrated into a variety of Amazon products to answer questions about products, place orders, and provide information about the weather, traffic, and more. By using AI to handle customer service inquiries, Amazon is able to reduce the burden on its human customer service representatives and provide a more efficient and convenient experience for customers.

**Conclusion:**

By leveraging user behaviour data, product information, and advanced machine learning models, Amazon can suggest products tailored to individual preferences, ultimately driving customer satisfaction, increasing sales, and solidifying its position as a global e-commerce giant.