**A08 Notes**

**Personalized Recommendations**

Based off previous purchases, or trends of things you’ve liked it can recommend new products. Also works from companies selling data, like when you buy something from amazon and begin getting ads related to that on different websites.

**Dynamic Pricing**

Based on what you’re interested in, searching for a specific item may show higher prices and hide the lower priced ones. But when you show interest but don’t buy something it’ll begin showing lower and lower prices until you buy it.

**Inventory Management**

Can manage inventory based on trends for season, geography, month, time and predict command. It can automatically place orders, increase or decrease them such as increasing Christmas items for Christmas and decreasing Halloween items.

**Customer Service**

AI can work all hours, automatically detect and recommend solutions to issues, and respond faster than a human worker typically can. There’s little disadvantage to this as if an AI model isn’t able to solve the issue, then a human worker can be put in place but smaller issues can be solved by an AI response.

**Fraud Detection**

When ordering online, it may not just detect fraudulent charges on cards, but typical purchase trends. If you buy something on your account for only 20 dollars over a few years, browsed only a few items or expensive items, then suddenly make a 3,000 dollar purchase over a few hours on super expensive items it may be flagged. Not just because it may think your account is stolen, it may think you have a stolen card or charge. Can first check the card and trends to confirm the purchase, then contact the card’s original owner to make sure it’s safe.

**Visual Search**

Can find specific brands of items, or similar items from a visual image or video. Some websites offer searches where you can upload a photo of a person and it can identify each clothing item to look like them, and similar items to fit with the style. Amazon can also recommend similar or bundled items that are similar as well. Visual searches can also detect trends from social media, able to run visual searches in areas where they deliver to and collect more information about their user-base, and see people that are interested in that post through the comments, likes, or impressions.

**Supply Chain Management**

Optimizes supply chain by finding the cheapest sources to get specific items from, how often they might get bought and cheaper brand options. Also can optimize shipping times and costs from location data of suppliers.

**Sentiment Analysis**

Can understand how people feel about products, like ratings or comments on sites, even visual searches of people posting pictures of their items.

**Virtual Try-On**

Can try everything on, makeups, clothings, accessories, everything can be displayed on an image of you so you’ll know exactly how you can look with whatever you buy.

**In-Store Use Case**

**Store Layout Optimization**

Essentials or needed items are put in the back or locations where they’ll pass other items. AI can find the best routes people need to take to intrigue them the most, such as having snacks at the end of checkout when you might be hungry from shopping.

**Problems Yet to be Solved**

**Data Privacy Concerns**

Personal data, such as personal history getting stolen/sold.

**Bias**

Human trained bias in AI

**Integration Challenges**

Needed infrastructure, websites, in-store integration, social media integration, many engines and servers are needed.

**Predictive Accuracy**

Certain situations are unpredictable, such as natural disasters or outages.

**Customer Trust**

AI trends like adaptive pricing, and stealing their info to make personalized recommendations may reduce the trust people have in stores and actually make them not want to buy certain items.

**Problems Created by AI**

**Over-Personalization**

Getting recommendations just from things spoke or bought/viewed can cause serious privacy concerns, causing distrust and a want to interact less with websites or businesses.

**Over-Reliance on Technology**

As technology gets better, people get lazier and are may not be able to solve problems they once were able to.

**Ethical Concerns**

How far AI prys into and finds people, and how just liking someone’s picture on social media can lead to product placements feels manipulative.