

44,000,000,000,000,000 bytes of data make up the digital universe¹

To help you navigate it, cloud data centers have moved from simply serving

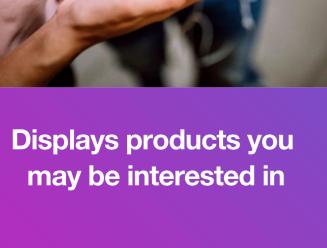
up unfiltered information to using recommendation engines powered by

artificial intelligence (AI) to predict and present to you only the things you may be interested in. The result is a highly personalized internet.

A recommendation engine

determines what you see online

News & social eCommerce Media streaming



million

products

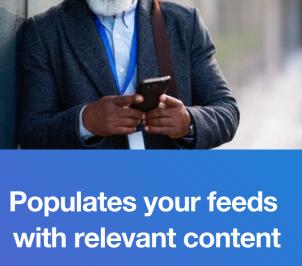
listed on Amazon²

Shows movies, videos and music you may like The numbers are staggering!

hours of video

uploaded to YouTube

each minute3



billion posts

& messages

posted on Facebook

each day4

Memory and storage fuel the transformation of data into personalized recommendations

How does a recommendation engine work?



is captured, including how people act and interact online.

Collection

moving data quickly and efficiently as it's collected. High-capacity QLC SSDs capture and store this massive amount of data.

High-performance memory is necessary for

Filtering & Preprocessing

Server DRAM temporarily holds the data being preprocessed. Fast, high-capacity NVMe™ SSDs hold the refined data that will be used for Al training.

Captured data is filtered

and distilled to only

relevant information.

3 Training

Compute-intensive Al

training develops a model

in the data and suggest

relevant content.

that can recognize patterns

Recommendation

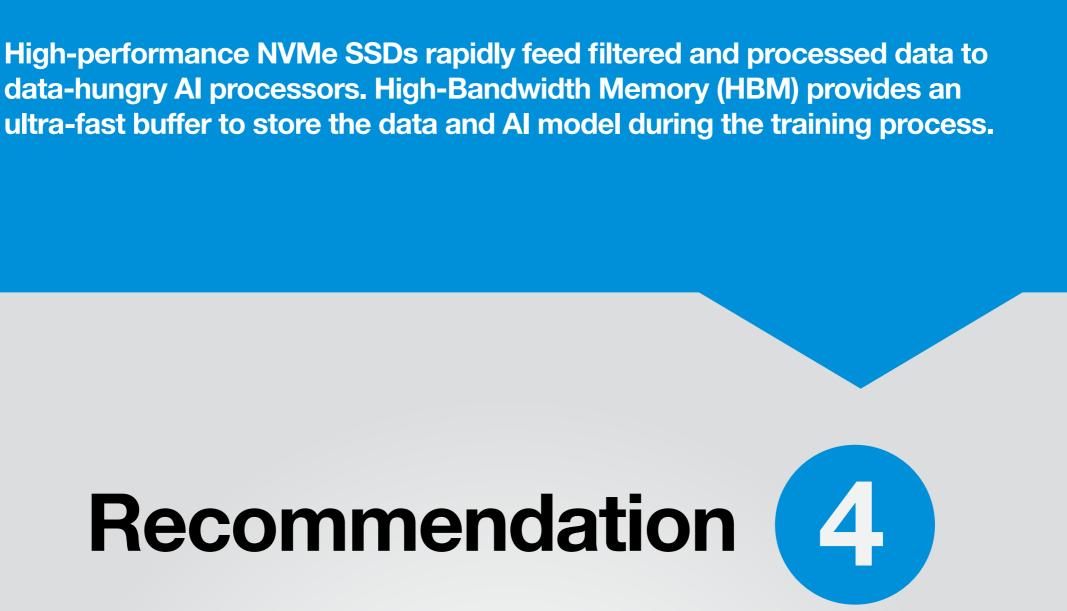
As you browse, trained

models recommend

User actions

personalized content.

Trained model



User data and trained models are

stored in memory for near-real-time

recommendations. Fast SSDs cache

Recommendations

Watch

Listen

Shop

Read

recommendation

recommendation

User ignores

any data that doesn't fit in memory.

Trained model

5 Whether you take or ignore a recommendation

feeds back into data

recommendations.

collection, honing future



Recommendation engines make suggestions in different ways

Ensemble What do multiple methods suggest? **Collaborative** What are people with similar tastes looking at?

Generic What is the most popular now? As recommendation engines become more sophisticated, they become increasingly complex and compute intensive. So future demand for high-performance memory and storage solutions will intensify to keep pace.

Content

at in the past?

What have you looked

<u>Learn more: micron.com/cioud</u>

¹ IDC Data Age Study 2025 ² Retail TouchPoints: How Many Products

Sources

Compute resources

- Does Amazon Carry? Figures and Statistics – 2020
- ³ MerchDope: 37 Mind Blowing YouTube Facts,
- ⁴ Brandwatch: 126 Amazing Social Media Statistics and Facts

Intelligence Accelerated

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