Spotify Discover Weekly and personalised playlists

IMPLEMENTED 2015 ONWARDS · MEDIA AND PUBLISHING · SWEDEN · BAND C · CLAIMED ONLY

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Spotify's Discover Weekly gives each listener a personalised playlist of new music every Monday, built with machine learning. By Spotify's account it has passed 100 billion tracks streamed. Spotify's own research and an independent study find algorithmic listening is less diverse.

ABOUT THIS SYNOPSIS

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Facts and figures are as reported by the sources listed below, which may be incomplete, self-reported or out of date. Check the original source before relying on any figure.

The impact band, proof marker and SEAM view are MarLuc's opinion. The organisation is not a MarLuc client and has not reviewed or endorsed this synopsis. Names and trademarks belong to their owners.

NOTICE WORDING LAST UPDATED 16 NOVEMBER 2026

AT A GLANCE

AI used: Machine learning recommender system building a personalised weekly playlist.

Implemented: 2015 onwards. Grade: band C, Process change, Claimed only.

Headline result, as reported: More than 100 billion tracks streamed and 56 million new artist discoveries a week, by Spotify's account at the playlist's tenth anniversary, June 2025

1 · The case

The facts, as reported by the 6 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Spotify. Audio streaming service. Serves more than three quarters of a billion people, by its co-chief executive in February 2026; its chief financial officer forecast 759 million monthly active users and 293 million subscribers for the first quarter of 2026. Canvas block: 3. Customers and proposition. Also 6. Data and technology, 4. Operations and process.

Business challenge

The challenge. Helping listeners find music they have not heard. An earlier album recommendation feature was not heavily used, and the engineer behind Discover Weekly thought navigating to it was too much work, per IEEE Spectrum.

Who implemented it

In-house (In-house): Spotify engineers built and run Discover Weekly.
Google Cloud (Model or cloud provider): Hosts the system's data on Cloud Bigtable, per IEEE Spectrum (2016).
Spotify's founder says the 2014 acquisition of The Echo Nest, a machine learning company, gave it personalisation.

Technology (SEAM pillar E)

SEAM types: T8 Predictive / ML models. Deployment: Not reported. Vendors and products: Google Cloud, Discover Weekly, Google Cloud Bigtable.

Where it was built in: A playlist in the Spotify app refreshed every Monday from listening logs, other users' playlists, web news and audio analysis; moved from Spotify's own servers to Google's Cloud Bigtable, per IEEE Spectrum (2016).

What changed

Before: recommendations a listener had to go and find. After: a personalised playlist delivered weekly. By Spotify's account, over half of monthly listeners returned each week to stream at least 10 tracks by May 2016, and in 2016 there were over 8,000 artists for whom more than half their monthly listeners came from Discover Weekly, per Paste. [1] [2] [3] [4] [5] [6]

What it cost

Not reported

What it saved

Not reported as savings. Usage by Spotify's account: nearly 5 billion tracks streamed by May 2016; more than 100 billion by June 2025; more than 56 million new artist discoveries a week, 77% from emerging artists. Spotify's co-chief executive said in February 2026 that investments in personalisation and AI are paying off in engagement and retention; no figure was given. [1] [2] [3] [4] [5] [6]

Governance and control

Staged rollout to staff, then 1% of users, then everyone, by the engineer's account. Spotify's own researchers studied the effect of recommendations on listening diversity and ran a randomised experiment. Accountable owner, review of what is recommended and controls on artist exposure: Not reported.

S2 · Accountable owner · Not reported
Not reported.

A1 · Safe use · Not reported
Not reported.

A2 · Human in the loop · Not reported
Not reported. Since June 2025 listeners can steer the playlist with genre controls, by Spotify's account. [1]

A3 · Monitoring and assurance · Claimed
Tested on staff and 1% of users before full rollout, by the engineer's account; Spotify researchers measured the effect of recommendations on diversity and ran a randomised experiment. [2] [4]

A4 · Vendor AI · Not reported
Not reported.

A5 · Agent controls · Not reported
No agents described.

A6 · Standards and regulation · Not reported
Not reported.

What worked, what did not, what is unproven

WORKED

– Weekly habit: over half of monthly listeners returned each week by May 2016, by Spotify's account per Paste.

– Scale: more than 100 billion tracks streamed by 2025, by Spotify's account.

– Artist discovery: more than 56 million new artist discoveries a week, 77% from emerging artists, by Spotify's account.

DID NOT

– Spotify's own 2020 research found algorithmically driven listening is associated with reduced consumption diversity, while high diversity is strongly associated with retention.

– An independent study of February 2025 data found Spotify's AI playlists drew from a quarter as many unique tracks as editorial playlists and favoured established US artists, though it found no evidence that Australian music was being killed.

– A few months after launch the playlist failed to update, its first production incident, per IEEE Spectrum.

UNPROVEN

– The effect of Discover Weekly on subscriptions, retention or revenue: no figure published.

– Whether the 2025 genre controls change the diversity of what listeners hear.

Timeline

2015 Engineers test Discover Weekly with all staff, then with 1% of users, then roll it out to about 100 million active users in mid-2015 [2]

May 2016 Spotify reports more than 40 million users and nearly 5 billion tracks streamed through Discover Weekly [3]

Apr 2020 Spotify researchers publish a study finding algorithmically driven listening is associated with reduced diversity [4]

Jun 2025 Spotify reports more than 100 billion tracks streamed through Discover Weekly and adds genre controls for Premium users [1]

Feb 2026 Spotify's founder names Discover Weekly as a proof point and says personalisation is core to everything the company does [6]

2 · Grade and SEAM assessment

MarLuc's opinion, made on the evidence above. How cases are graded: marluc.co.uk/case-studies/how-we-rate

Level of change and impact

Claimed: B. Grade: C, Process change. Proof: Claimed only. Level of change: Process change.

Process change (Level 2, band C), claimed as an operating model effect (band B) through engagement and retention. Discovery runs on machine learning playlists; business effects are stated but not quantified.

Graded C, claimed B. Music discovery was redesigned around machine learning playlists, and Spotify's leadership says personalisation is core to everything it does. Usage figures are Spotify's own; the effect on engagement and retention is stated but not quantified in the sources.

The SEAM view and lessons learnt

Discover Weekly shows a small team turning existing machine learning parts into a product habit, tested in stages before full release. The usage figures are large but self-reported, and both Spotify's own research and an independent study point to a trade-off between short-term relevance and diversity. For a larger organisation, the transferable point is to track the long-term side effects of a recommender, not only clicks and streams.

1. Roll out to staff and a small share of users before full release.
2. Track diversity and long-term effects as well as short-term engagement.
3. Give users controls to steer what the system recommends.

Evidence

Score 2 of 4. Mixed: usage figures are Spotify's own; Spotify's peer-reviewed research and an independent study commissioned by the Victorian Music Development Office examine diversity effects.

Evaluation method. Self-reported company figures for usage; company research with a randomised experiment, and an independent analysis of 2.27 million tracks, on diversity.

Sources disagree. Spotify says 77% of weekly Discover Weekly discoveries come from emerging artists; the independent study found Spotify's AI playlists in general favour established artists. The measures and scope differ: the study covered AI-mediated playlists, not Discover Weekly alone.

Status. Ongoing: Discover Weekly turned 10 in June 2025 with new controls, and Spotify's founder named it as a proof point in February 2026.

3 · Original sources

Read these in full. To challenge a fact or a grade, use the contact form at marluc.co.uk or the link on https://marluc.co.uk/case-studies/spotify-discover-weekly

[1] Spotify Newsroom: Discover Weekly turns 10 (June 2025)
https://newsroom.spotify.com/2025-06-30/discover-weekly-turns-10-celebrating-100-billion-tracks-streamed-and-a-decade-of-personalized-discovery/

[2] IEEE Spectrum: The little hack that could: the story of Spotify's Discover Weekly recommendation engine (September 2016)
https://spectrum.ieee.org/the-little-hack-that-could-the-story-of-spotifys-discover-weekly-recommendation-engine

[3] Paste: Spotify's Discover Weekly hits 40 million users, 5 billion tracks streamed (May 2016)
https://pastemagazine.com/music/spotifys-discover-weekly-hits-40-million-users

[4] Spotify Research: Algorithmic effects on the diversity of consumption on Spotify (The Web Conference, 2020)
https://research.atspotify.com/publications/algorithmic-effects-on-the-diversity-of-consumption-on-spotify

[5] Startup Daily, republished from The Conversation: We analysed more than 2 million tracks on Spotify to find out if its AI is 'killing' Australian music (March 2026)
https://www.startupdaily.net/topic/artificial-intelligence-machine-learning/we-analysed-more-than-2-million-tracks-on-spotify-to-find-out-if-its-ai-is-killing-australian-music/

[6] Spotify: Q4 2025 earnings call prepared remarks (February 2026)
https://s29.q4cdn.com/175625835/files/doc_financials/2025/q4/Q4-25-Earnings-Call-Prepared-Remarks.pdf

Spotify website: https://www.spotify.com

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VERSION HISTORY

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