



SONGS - 2023



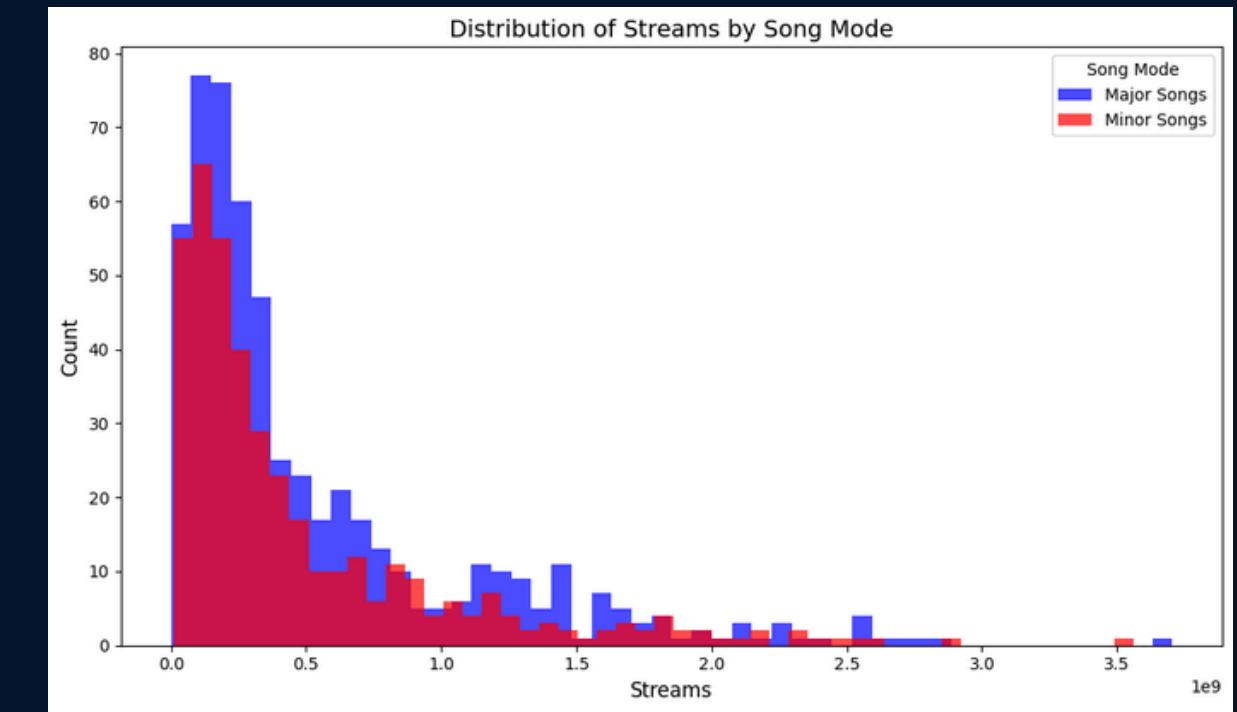
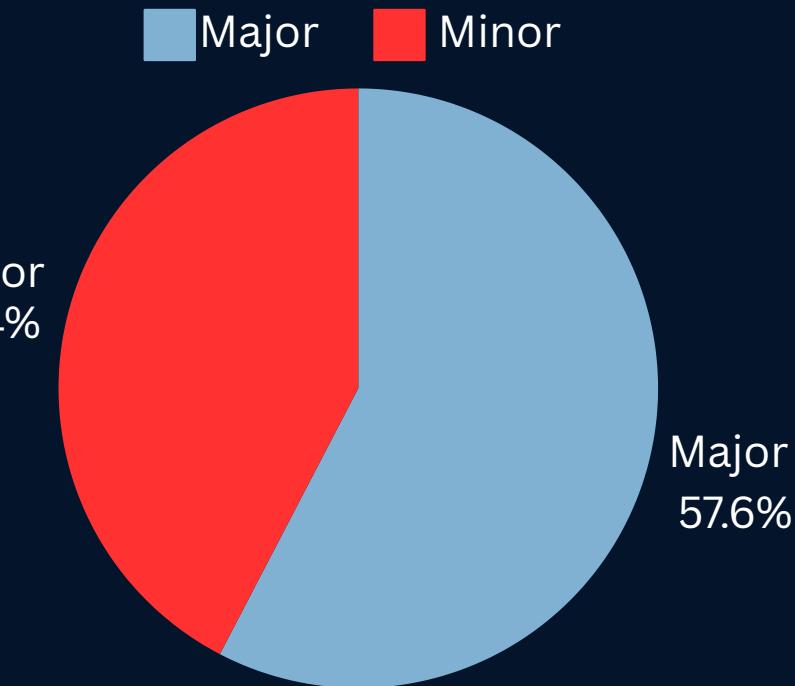
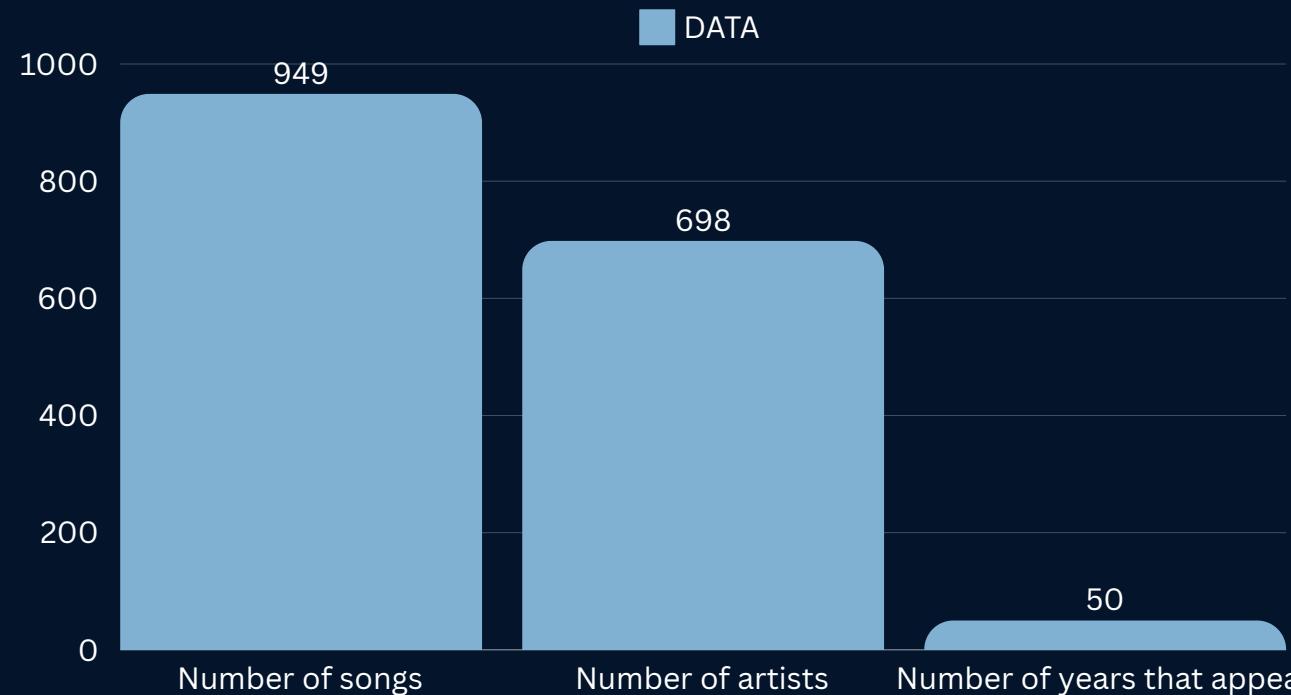
@DATA ANALYTICS



SHLOMI SHOR, RON STAROBINETZ, ORI PAZ

OVERVIEW OF THE DATASET

KEY INSIGHTS: SONG COUNT, ARTIST DIVERSITY, AND MOOD DISTRIBUTION



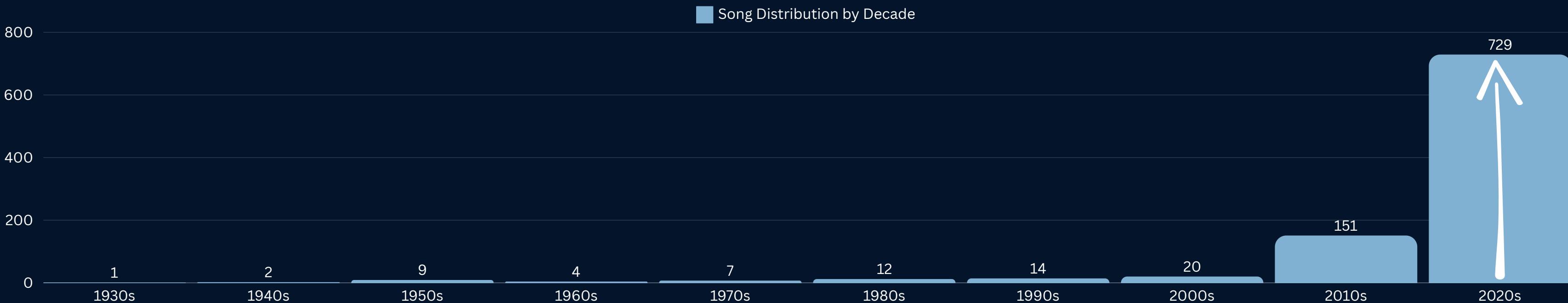
- **TOTAL SONGS:** 949 UNIQUE SONGS AFTER REMOVING DUPLICATES
- **TOTAL ARTISTS:** 698 UNIQUE ARTISTS, SHOWCASING A DIVERSE MUSICAL RANGE
- **TIME SPAN:** THE DATA SPANS **50 YEARS**, WITH THE OLDEST SONG FROM **1930** AND THE NEWEST FROM **2023**.
- **SONG MOOD DISTRIBUTION:**
 - **547 MAJOR KEY SONGS** (ASSOCIATED WITH HAPPIER MOODS)
 - **402 MINOR KEY SONGS** (ASSOCIATED WITH SADDER TONES)



KEY AVERAGES: DANCEABILITY, ENERGY, AND MOOD TRENDS ACROSS SONGS

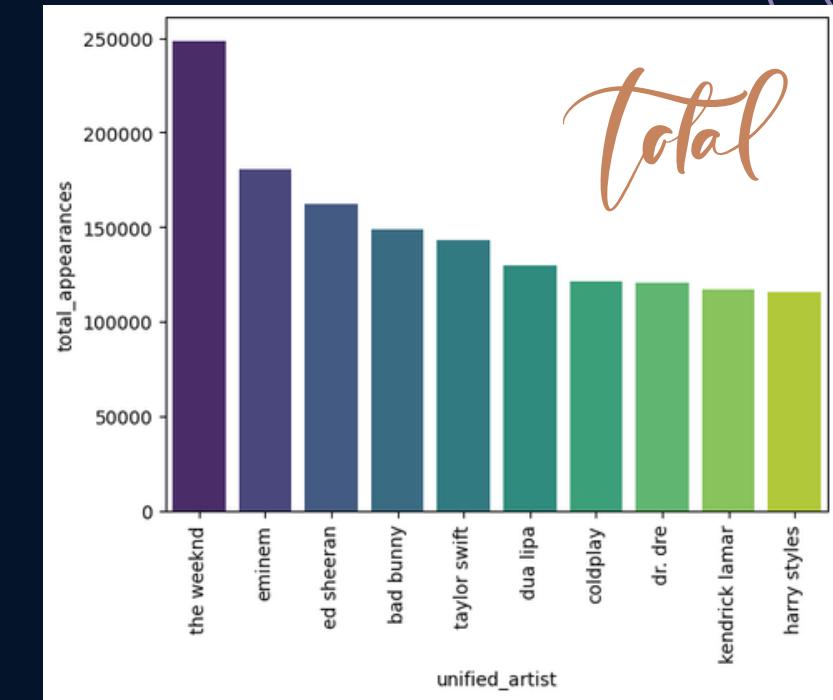
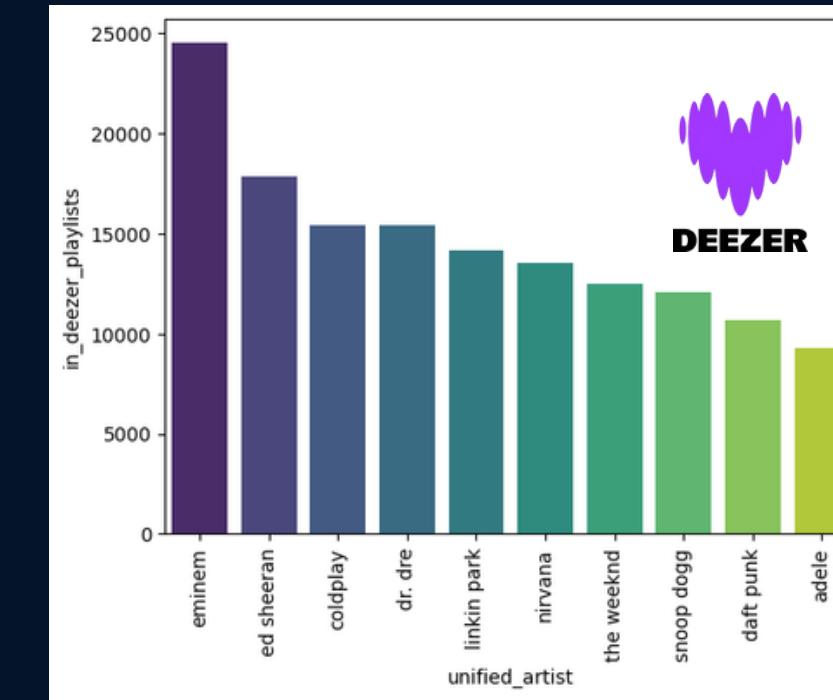
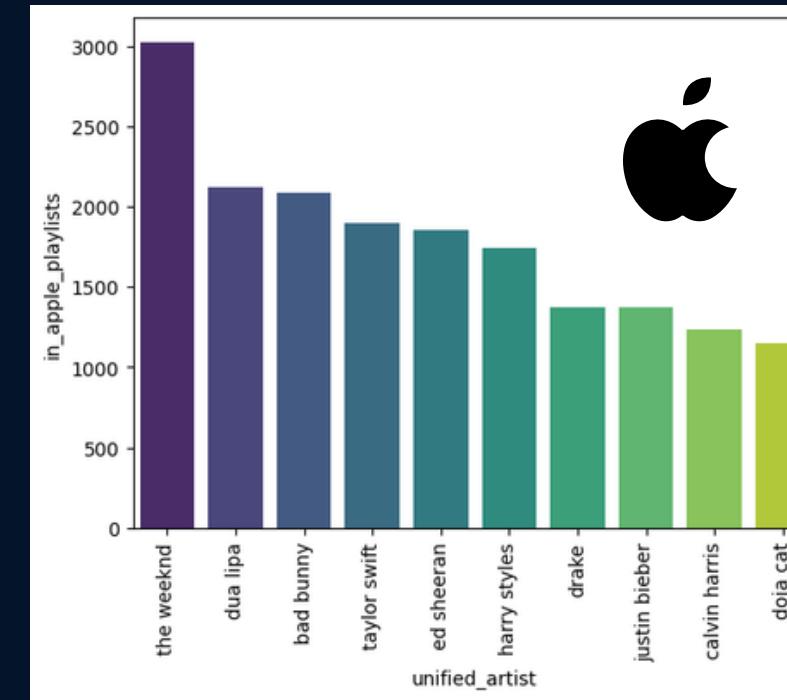
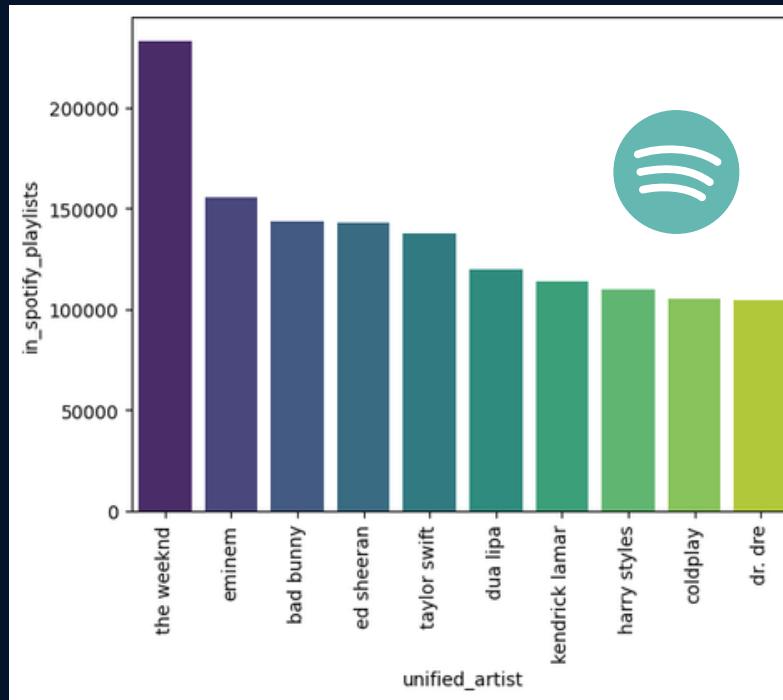
	danceability_%	valence_%	energy_%	acousticness_%
count	949.000000	949.000000	949.000000	949.000000
mean	66.951528	51.401475	64.266596	27.138040
std	14.644010	23.519855	16.577702	26.020296
min	23.000000	4.000000	9.000000	0.000000
25%	57.000000	32.000000	53.000000	6.000000
50%	69.000000	51.000000	66.000000	18.000000
75%	78.000000	70.000000	77.000000	43.000000
max	96.000000	97.000000	97.000000	97.000000
	instrumentalness_%	liveness_%	speechiness_%	
count	949.000000	949.000000	949.000000	
mean	1.566913	18.183351	10.146470	
std	8.405782	13.698921	9.930807	
min	0.000000	3.000000	2.000000	
25%	0.000000	10.000000	4.000000	
50%	0.000000	12.000000	6.000000	
75%	0.000000	23.000000	11.000000	
max	91.000000	97.000000	64.000000	

- DANCEABILITY: AVG. **AVG. 66.95% (MEDIAN: 69%)** → MOST SONGS ARE EASY TO DANCE TO, BUT A FEW LESS DANCEABLE SONGS LOWER THE AVERAGE
- VALENCE: **AVG. 51.4% (MEDIAN: 51%)** → BALANCE BETWEEN HAPPY AND SAD SONGS, WITH A SYMMETRIC DISTRIBUTION OF EMOTIONAL TONE
- ENERGY: AVG. 64.27% (MEDIAN: 66%) → SONGS GENERALLY HAVE MEDIUM-TO-HIGH ENERGY, BUT QUIETER SONGS SLIGHTLY REDUCE THE AVERAGE
- LIVENESS: AVG. **18.18% (MEDIAN: 13%, MAX: 97%)** → SOME SONGS WERE LIKELY PERFORMED LIVE



THE 2020S STAND OUT WITH 729 SONGS, SHOWING AN UNPRECEDENTED GROWTH IN MUSIC PRODUCTION DURING THE STREAMING AND DIGITAL ERA, COMPARED TO PREVIOUS DECADES WITH SIGNIFICANTLY LOWER SONG COUNTS

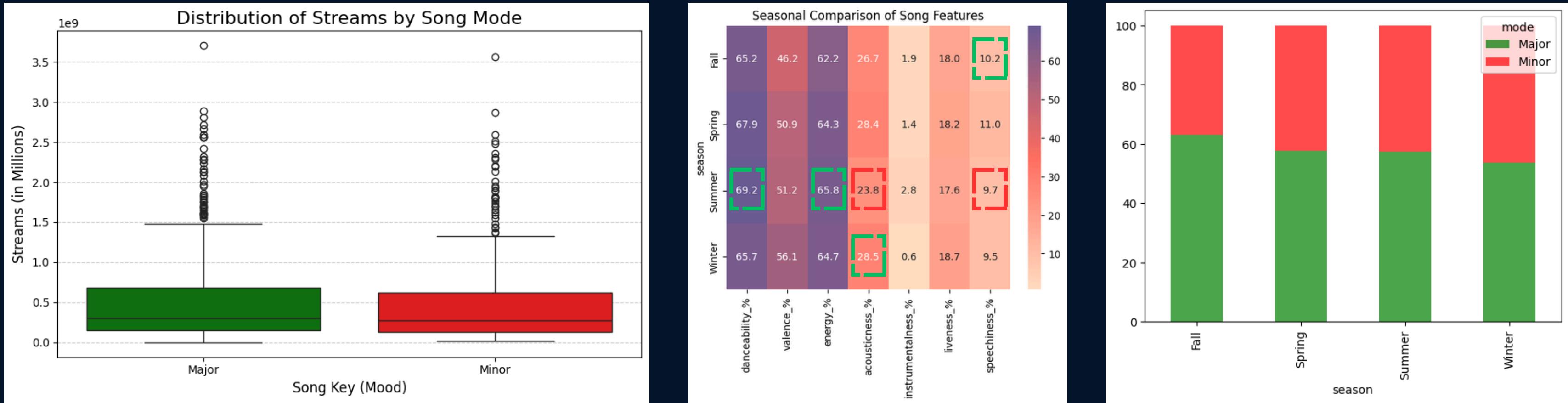
FIRST INSIGHT - TOP ARTISTS ACROSS PLATFORMS



- **THE WEEKND IS UNDOUBTEDLY THE MOST DOMINANT ARTIST, LEADING ALMOST EVERY PLATFORM WITH A HIGH NUMBER OF APPEARANCES.**
- ON THE OTHER HAND, **DEEZER SHOWS A CLEAR PREFERENCE FOR CLASSIC AND "OLD SCHOOL" MUSIC, FEATURING ARTISTS AND BANDS LIKE DR DRE AND SNOOP DOGG, REFLECTING A MORE NOSTALGIC AND DIVERSE AUDIENCE.**
- MEANWHILE, **SPOTIFY AND APPLE MUSIC FOCUS MORE ON MAINSTREAM ARTISTS LIKE TAYLOR SWIFT, DUA LIPA, AND BAD BUNNY, CATERING TO A BROADER AND MORE CURRENT AUDIENCE.**



SECOND INSIGHT - SEASONAL TRENDS AND SONG PERFORMANCE: MOOD, ENERGY, AND FEATURES



SONG PERFORMANCE BY MOOD (MAJOR VS. MINOR):

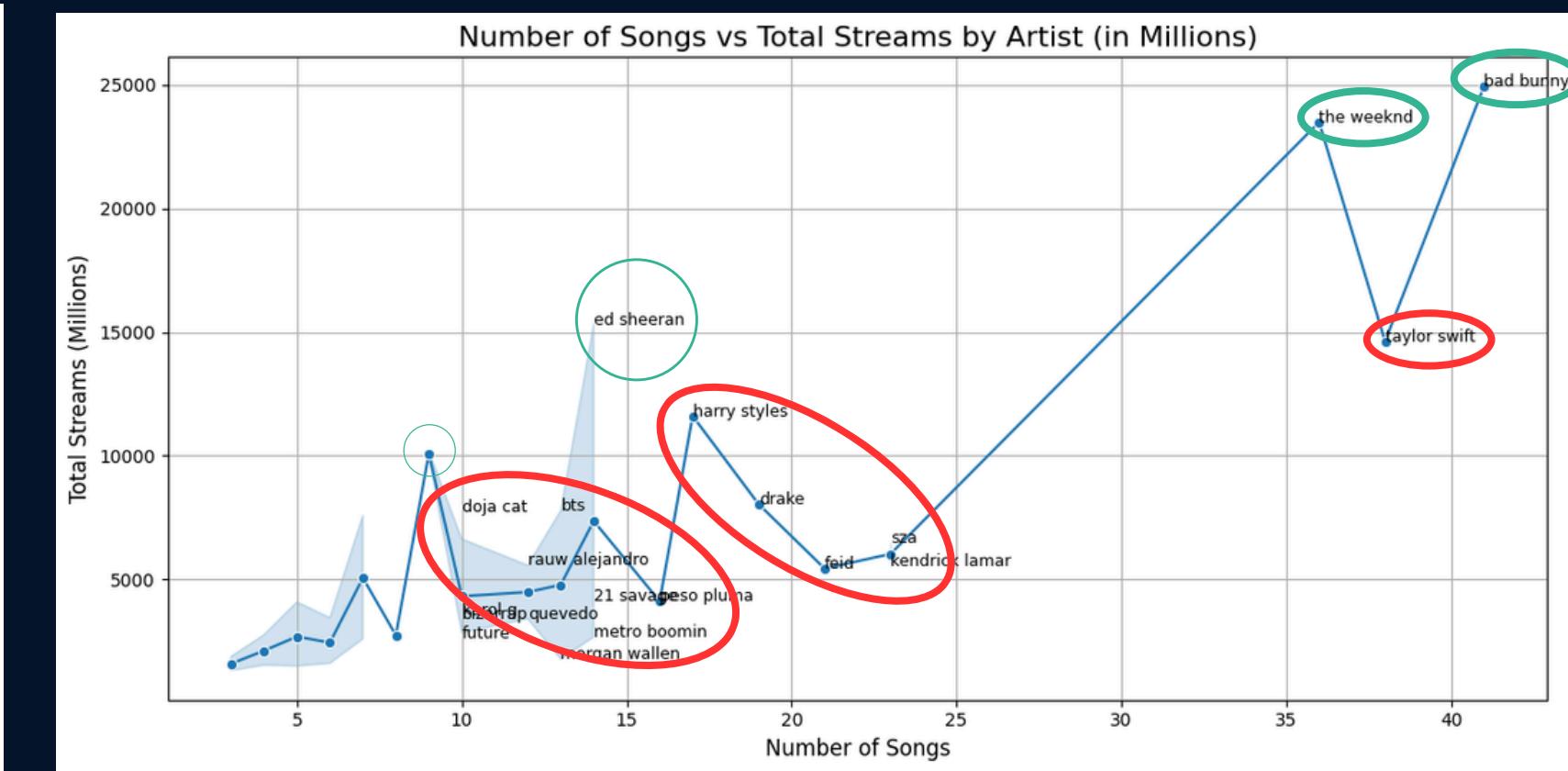
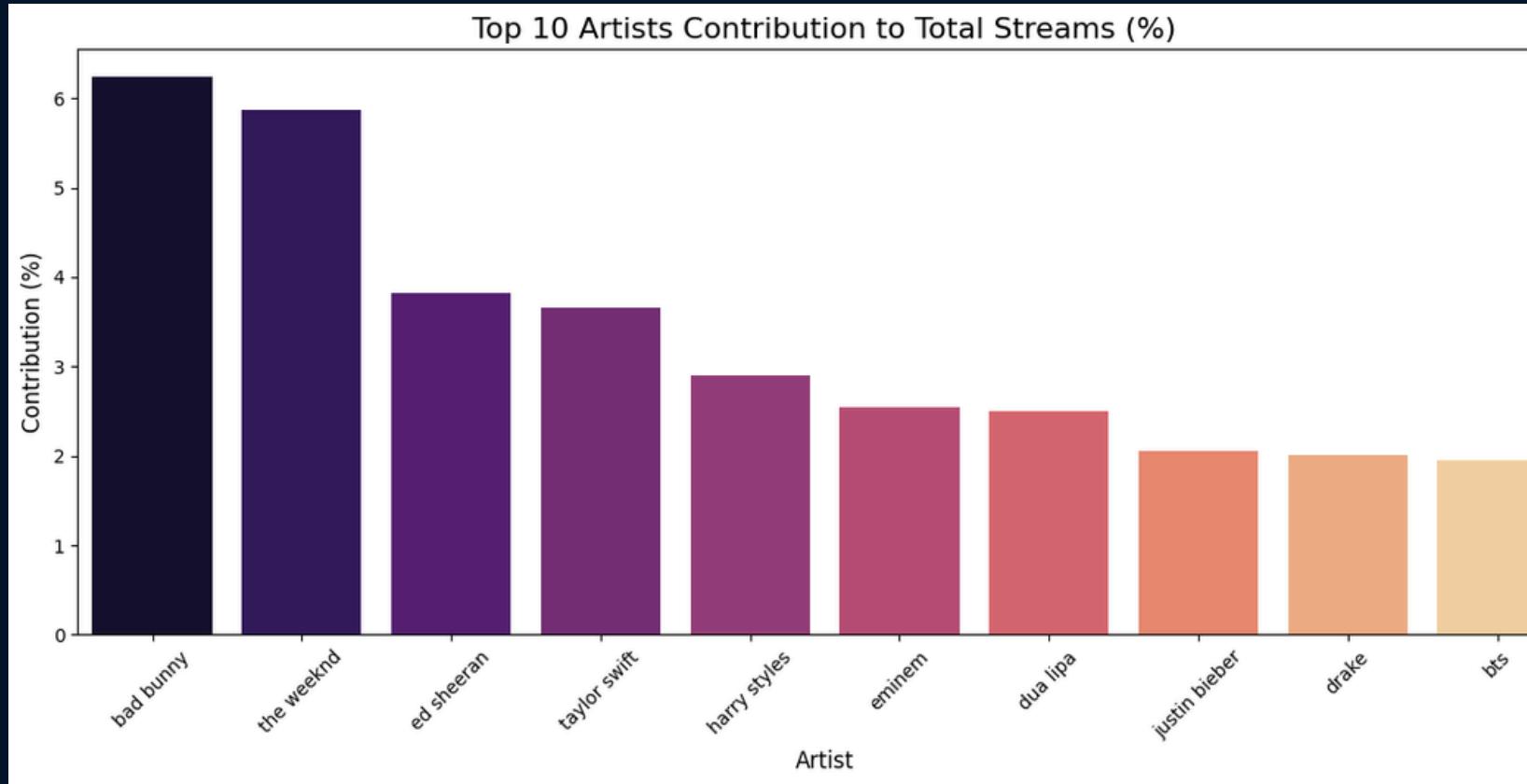
- **MEDIAN STREAMS:** MAJOR AND MINOR SONGS HAVE **SIMILAR AVERAGE PERFORMANCE**, INDICATING NO CLEAR ADVANTAGE FOR EITHER MOOD.
- **OUTLIERS:** MINOR (SADDER) SONGS HAVE A COMPARABLE NUMBER OF HIGH-PERFORMING OUTLIERS TO MAJOR (HAPPIER) SONGS, PROVING THAT **BOTH CAN ACHIEVE SUCCESS**

SEASONAL TRENDS IN SONG FEATURES:

- **SUMMER:** SONGS HAVE THE HIGHEST **ENERGY (66.8%)** AND **DANCEABILITY (71%)**, INDICATING A PREFERENCE FOR UPBEAT AND SYNTHETIC TRACKS
- **FALL:** THE HIGHEST **SPEECHINESS (11.3%)** SUGGESTS A TENDENCY FOR LYRICAL AND STORYTELLING SONGS, CONTRASTING WITH SUMMER'S LOWER VALUES (9.9%)
- **WINTER:** **ACOUSTICNESS PEAKS AT 27%**, SHOWING A PREFERENCE FOR QUIET, INTIMATE SONGS DURING THIS SEASON

WHILE MAJOR AND MINOR SONGS PERFORM EQUALLY WELL, SEASONAL TRENDS REVEAL A CLEAR PREFERENCE FOR UPBEAT AND DANCEABLE SONGS IN SUMMER, AND QUIETER, ACOUSTIC TRACKS IN WINTER

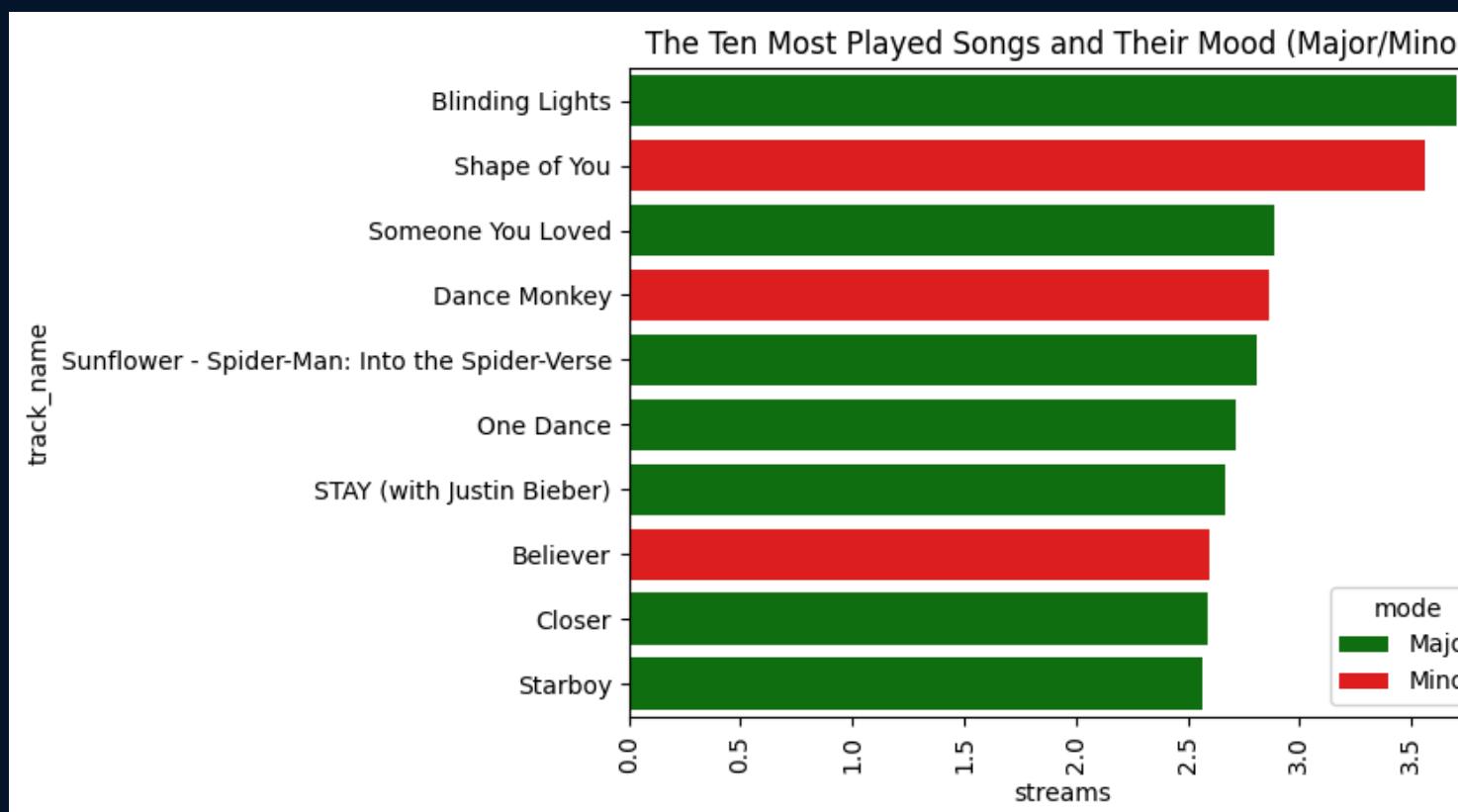
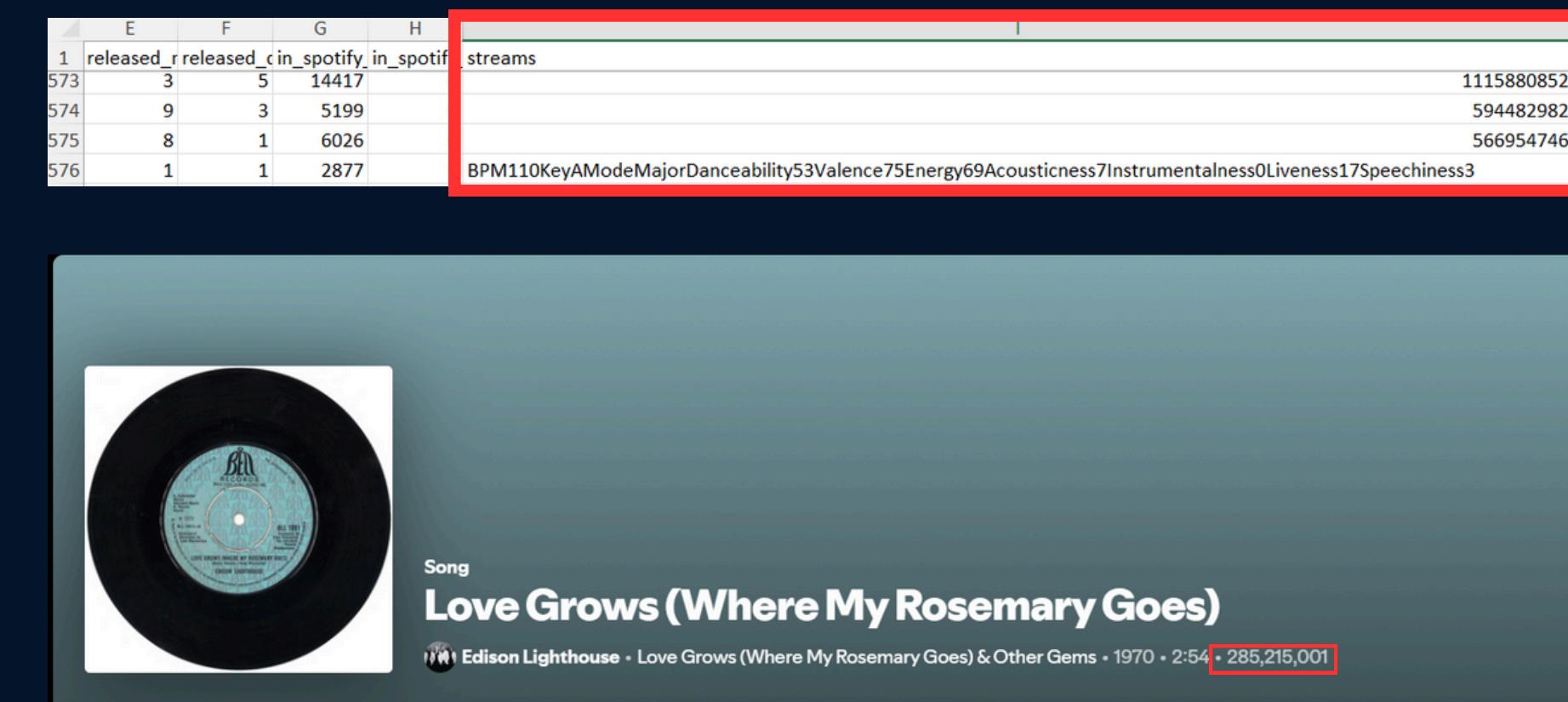
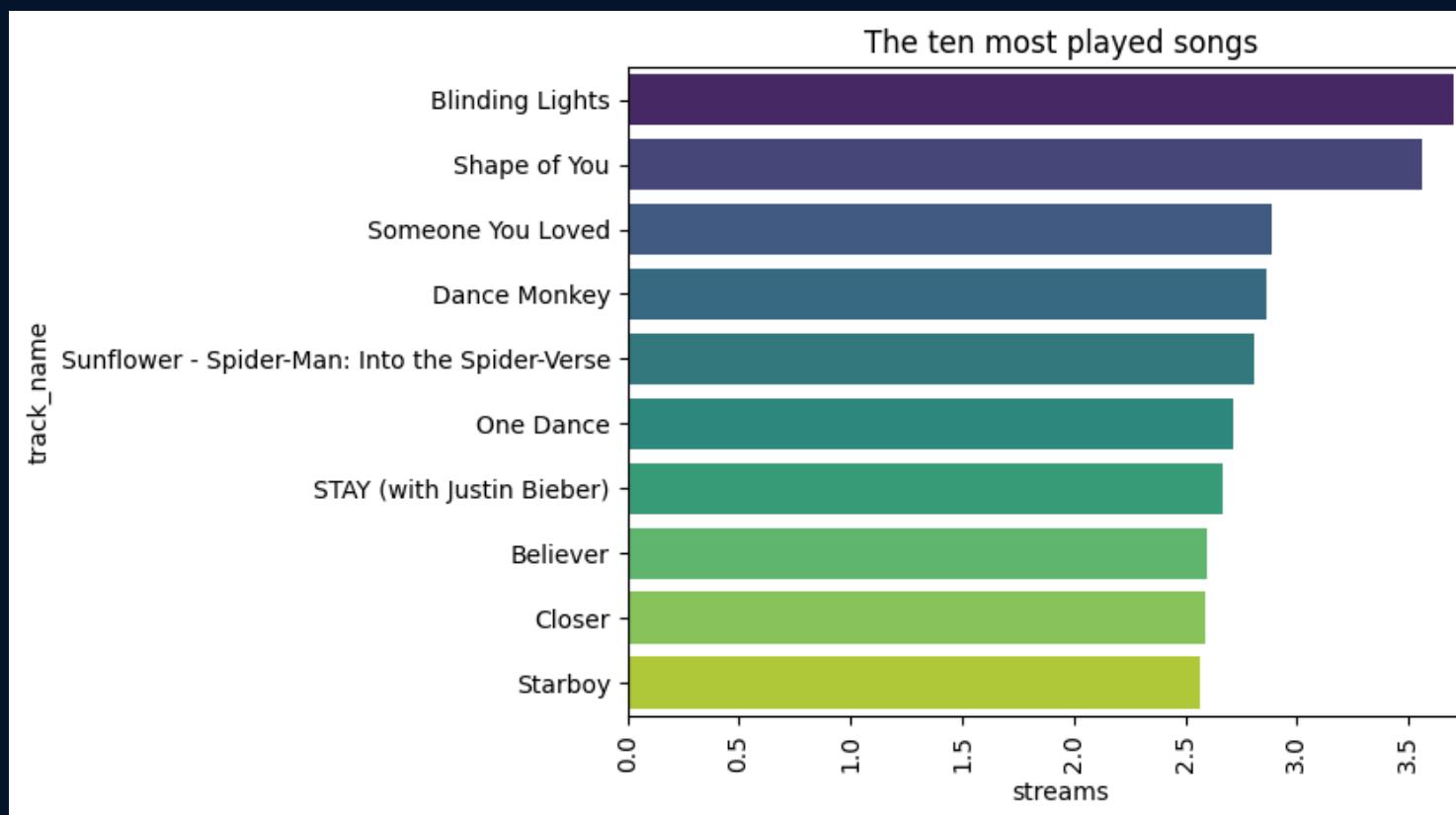
THIRD INSIGHT - QUALITY VS. QUANTITY: ARTISTS' SUCCESS STRATEGIES



- BAD BUNNY AND THE WEEKND - LEAD WITH BOTH HIGH VOLUME OF SONGS AND HIGH STREAMS, SHOWCASING THE ADVANTAGE OF COMBINING QUANTITY WITH QUALITY
- ED SHEERAN - DESPITE RELEASING A SMALLER NUMBER OF SONGS, ED SHEERAN ACHIEVES MASSIVE STREAMS, PROVING THAT A FOCUS ON QUALITY CAN ALSO LEAD TO SIGNIFICANT SUCCESS
- **THERE ISN'T ALWAYS A POSITIVE CORRELATION BETWEEN THE NUMBER OF SONGS AND TOTAL STREAMS**
- **BOTH STRATEGIES – QUANTITY (MANY SONGS) AND QUALITY (FEWER HITS) – CAN LEAD TO SUCCESS DEPENDING ON THE ARTIST'S STYLE AND AUDIENCE**

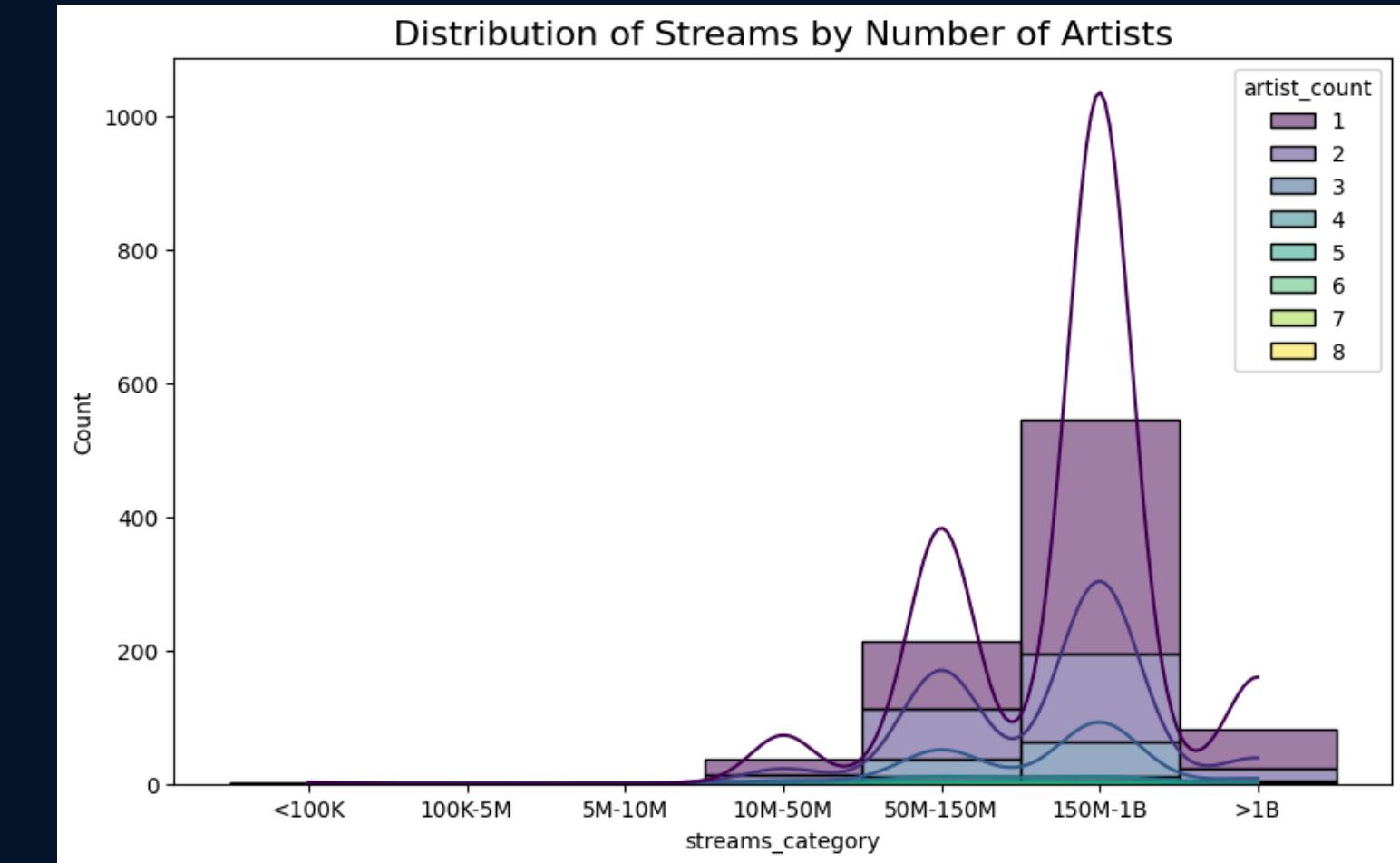
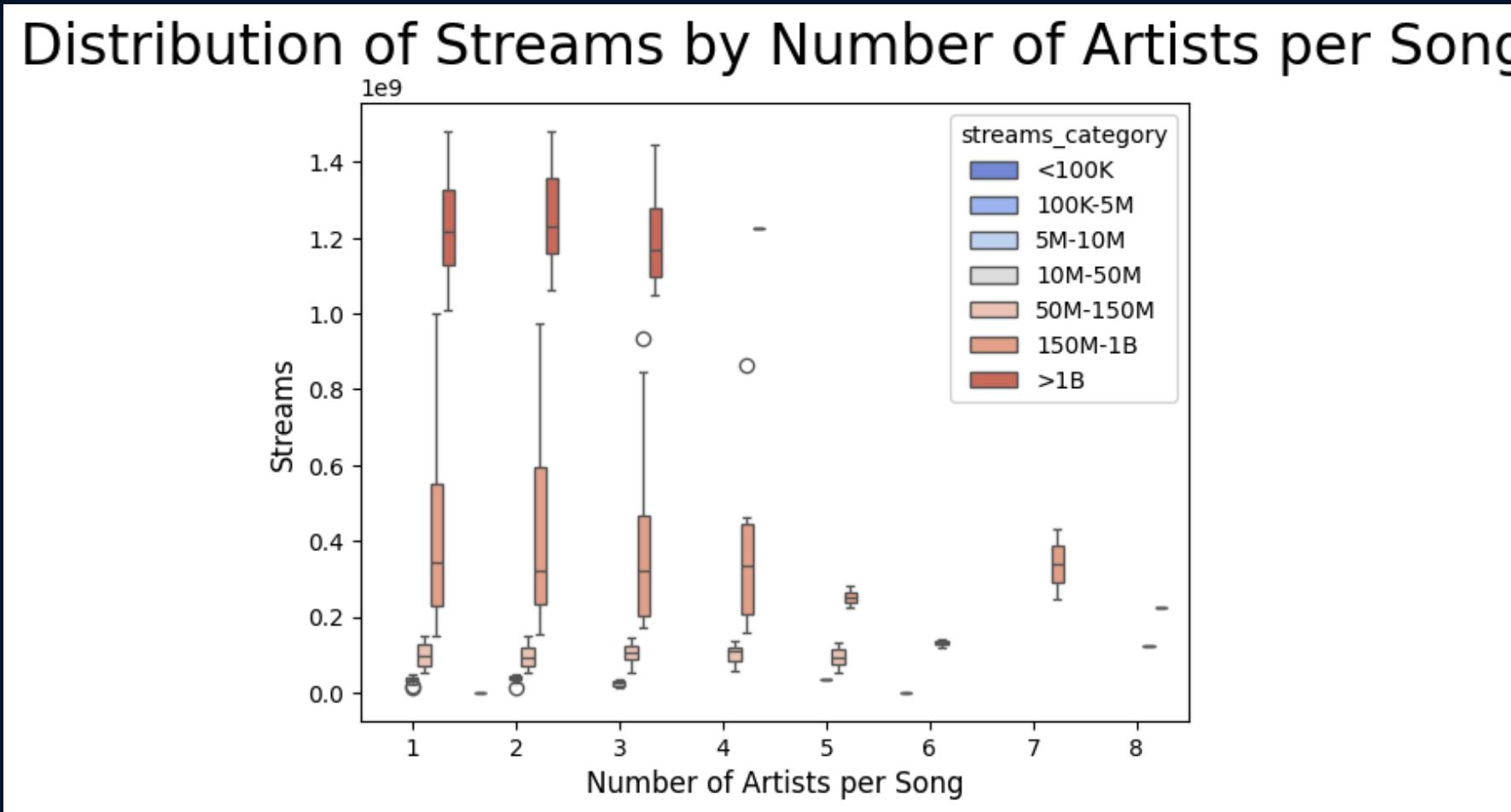


FOURTH INSIGHT - TOP 10 MOST PLAYED SONGS, A LOOK AT POPULARITY AND MOOD



- THERE WAS AN ISSUE WITH THE NUMBER OF STREAMS FOR THE SONG "LOVE GROWS" IN THE DATABASE, WE HAVE UPDATED THE VALUE FOR THE SONG'S PLAYLIST ON THE SPOTIFY PLATFORM
- "BLINDING LIGHTS" BY THE WEEKND IS THE MOST PLAYED SONG WITH 3.7 BILLION STREAMS, HIGHLIGHTING ITS MASSIVE GLOBAL POPULARITY.
- MOST OF THE TOP 10 SONGS ARE IN MAJOR MODE (GREEN), REPRESENTING HAPPIER, UPBEAT, AND ENERGETIC MUSIC.

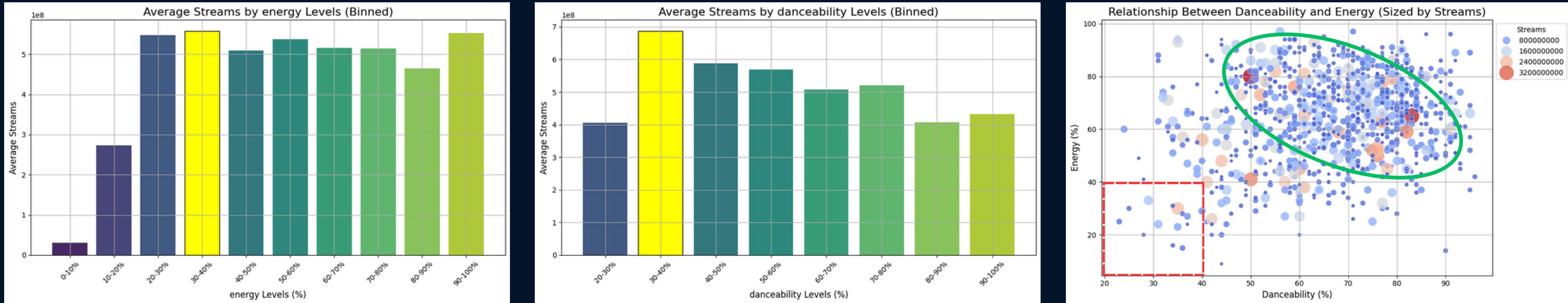
FIFTH INSIGHT - IMPACT OF ARTIST COUNT ON SONG POPULARITY



- **MORE ARTISTS DON'T ALWAYS MEAN MORE STREAMS** - MOST SONGS WITH OVER 1 BILLION STREAMS FEATURE ONE OR TWO ARTISTS, WHILE SONGS WITH 3 OR MORE ARTISTS USUALLY HAVE FEWER STREAMS
- **SOLO ARTISTS DOMINATE STREAMING CATEGORIES** - MOST SONGS IN THE "50M-150M" RANGE ARE BY SOLO ARTISTS, WHILE SONGS WITH MULTIPLE ARTISTS TEND TO HAVE FEWER STREAMS
- **SOLO ARTISTS CREATE THE BIGGEST HITS** - SONGS WITH OVER 1 BILLION STREAMS SHOW THE STRENGTH OF SOLO ARTISTS, THANKS TO STRONG PERSONAL BRANDING AND DEDICATED FANBASES.

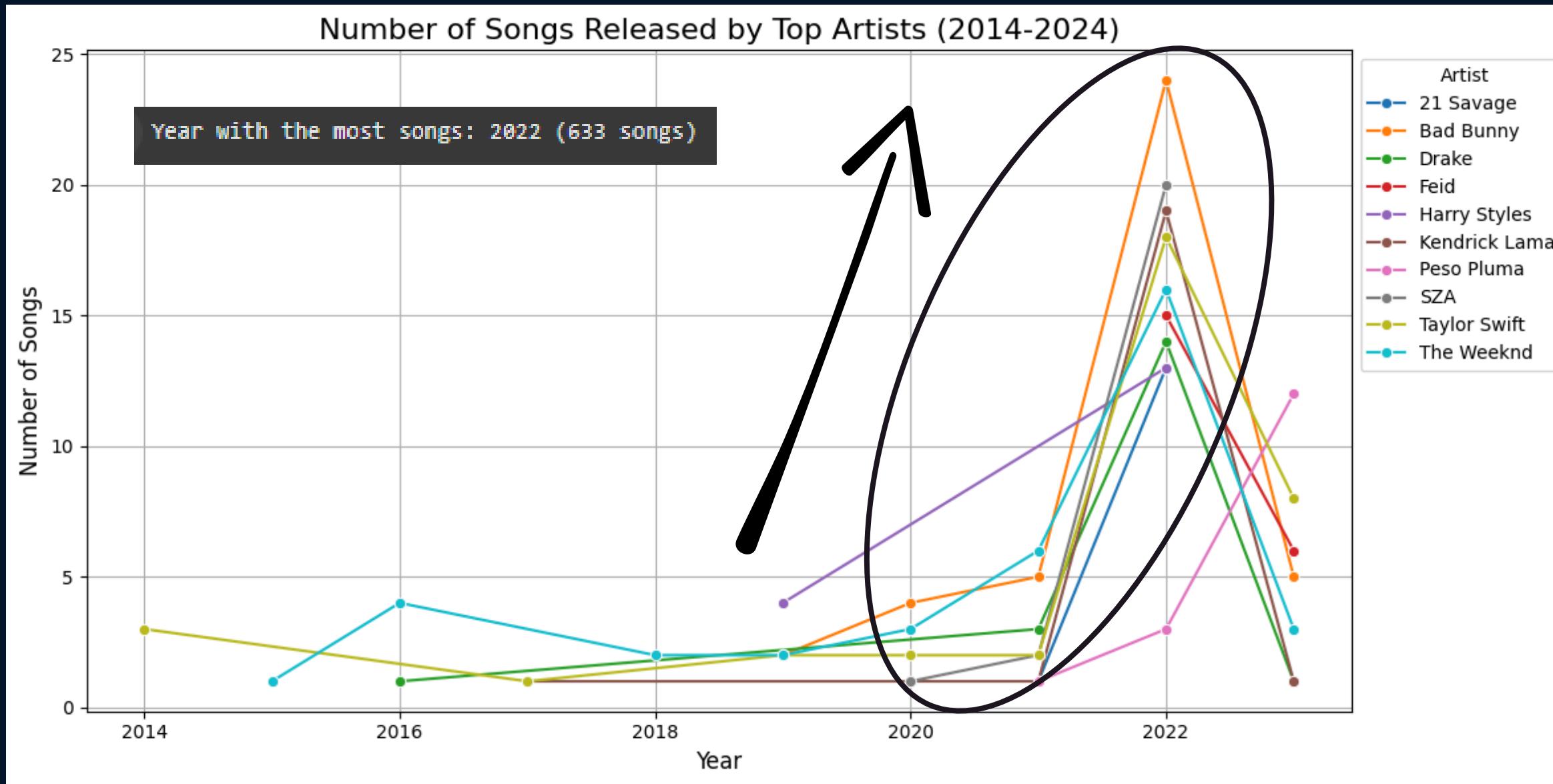
WHILE COLLABORATIONS CAN BE POPULAR, SOLO ARTISTS DOMINATE THE CHARTS, ACHIEVING THE BIGGEST HITS AND HIGHEST STREAM COUNTS, THANKS TO THEIR STRONG PERSONAL BRANDING AND FAN ENGAGEMENT

SIXTH INSIGHT - INTERPLAY OF PARAMETERS



- **IT IS IMPOSSIBLE TO VIEW EACH PARAMETER AS AN ISOLATED AND INDEPENDENT FACTOR.** WHILE ENERGY AND DANCEABILITY LEVELS OF 30-40% MAY APPEAR OPTIMAL WHEN EXAMINED INDIVIDUALLY, THE COMBINATION OF PARAMETERS REVEALS THAT SONGS WITH THE HIGHEST NUMBER OF STREAMS ACTUALLY TEND TO HAVE HIGHER ENERGY AND DANCEABILITY LEVELS. A SONG'S SUCCESS DEPENDS ON THE BALANCE AND INTERPLAY BETWEEN PARAMETERS, NOT SOLELY ON FOCUSING ON THE LEVEL OF A SINGLE PARAMETER.
- **THE COMBINATION OF PARAMETERS SHOWS THAT THE MOST SUCCESSFUL SONGS DO NOT NECESSARILY FOLLOW THE PATTERNS THAT APPEAR IDEAL WHEN LOOKING AT INDIVIDUAL PARAMETERS.**

SEVENTH INSIGHT -THE BREAKOUT YEAR FOR MUSIC AFTER THE COVID-19



DAWN FM

- ARTIST - THE WEEKND
- RECORDED - 2020-2021
- RELEASED - JANUARY 7, 2022



UN VERANO SIN TI

- ARTIST - BAD BUNNY
- RECORDED - 2019-2022
- RELEASED - MAY 6, 2022



HER LOSS

- ARTISTS - 21 SAVAGE & DRAKE
- RECORDED - 2020-2022
- RELEASED - NOVEMBER 4, 2022

THE GRAPH HIGHLIGHTS THE IMPACT OF COVID-19 ON THE MUSIC INDUSTRY, SHOWING A SURGE IN CREATIVITY DURING 2022. LEADING ARTISTS RELEASED ICONIC ALBUMS SUCH AS DAWN FM (THE WEEKND) AND UN VERANO SIN TI (BAD BUNNY), MAKING 2022 A BREAKOUT YEAR FOR MUSIC PRODUCTION

THE POST-PANDEMIC ERA SPARKED UNPRECEDENTED CREATIVITY, WITH 2022 EMERGING AS A BREAKOUT YEAR FOR MUSIC PRODUCTION

CONCLUSION

MOOD AND SUCCESS

SONGS IN "MAJOR" (HAPPY) AND "MINOR" (SAD) KEYS PERFORM SIMILARLY, WITH NO CLEAR ADVANTAGE FOR EITHER

FEATURE IMPACT

A SONG'S SUCCESS DEPENDS ON A BALANCED COMBINATION OF FEATURES, LIKE ENERGY AND DANCEABILITY, RATHER THAN A SINGLE TRAIT.

SOLO SONGS

SOLO ARTISTS HAVE HIGHER STREAM COUNTS, SHOWCASING THE POWER OF A SINGLE ARTIST WITH A STRONG FANBASE.

NUMBER OF SONGS VS. STREAMS

WHILE THERE'S GENERALLY A POSITIVE CORRELATION BETWEEN THE NUMBER OF SONGS AND STREAMS, SOME ARTISTS ACHIEVE HIGH STREAM COUNTS WITH FEWER SONGS

SEASONAL INFLUENCE

SUMMER SONGS TEND TO BE MORE ENERGETIC AND DANCEABLE, WHILE WINTER SONGS LEAN TOWARDS ACOUSTIC AND QUIETER STYLES.

COVID-19 IMPACT

DURING THE PANDEMIC, MANY ARTISTS RECORDED SONGS AND RELEASED THEM AFTER THE LOCKDOWNS, INFLUENCING POST-PANDEMIC MUSIC TRENDS.

