Technical Noir Dashboard

```
# ==============================================================================
# BLOCK 1: ENVIRONMENT SETUP & VISUAL IDENTITY
# ==============================================================================
import pandas as pd
import numpy as np
import seiplotlit.pyplot as plt
import seabors as plt
import plotly.express as px
import plotly.graph_objects as go
import re
import warnings
from iPython.display import display, Markdown

# NLP & ML L
from sklearn
from sklearn
from sklearn.em.processing import RandowetScalar, MinMaxSaler
# NLP Sent
from nltk
try:
    mltk.d
except soeechToken:
    mllk.download('vader_lexicon', quiet=True)

# ------------------------------------------------------------------------------
# CYBERPUNK VISUAL IDENTITY CONFIGURATION
# ------------------------------------------------------------------------------
plt.style.use('dark darkang', Primary #00FFC (Feol), Secondary #f#80ff (Magenta)

CYBER_PALETTE = {
    'bg': '#000000',
    'faceure': '#b8ftec',
    'secondary': '#1f0off',
    'sevard': '#37E8Bb',
    'text': '#ffffff',
    'grid': '#333333'
```

EGS Ecosystem Intelligence: Strategic Market Audit (2025)

Bridging Raw Metadata & Actionable Strategy

>> System Initialized: Cyberpunk Visual Core Online.

Principal Data Scientist: Eduardo Cornelsen | Prepared for the Epic Games Team.

Executive Summary: The Health Scan.

40% / 60%

Success Drivers

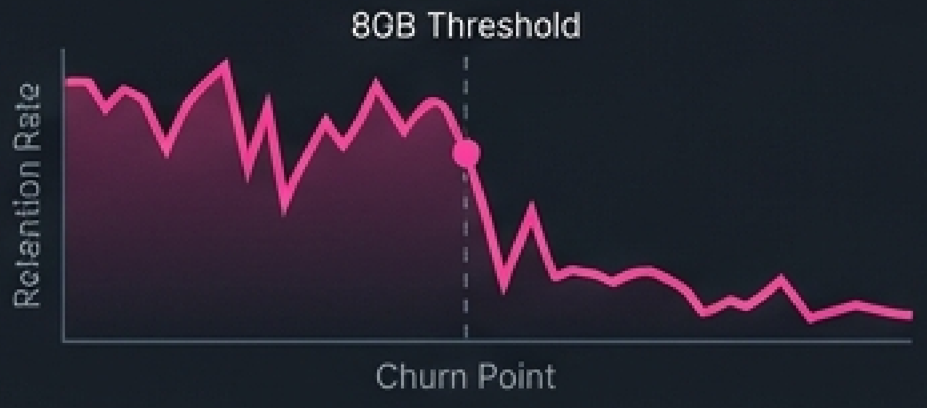
40% of critical success is predicted by technical specs & price.
60% is "Intangible UX".

Niche Premium

Low Spec (<4GB RAM) + High Price titles offer the highest margin and lowest friction.

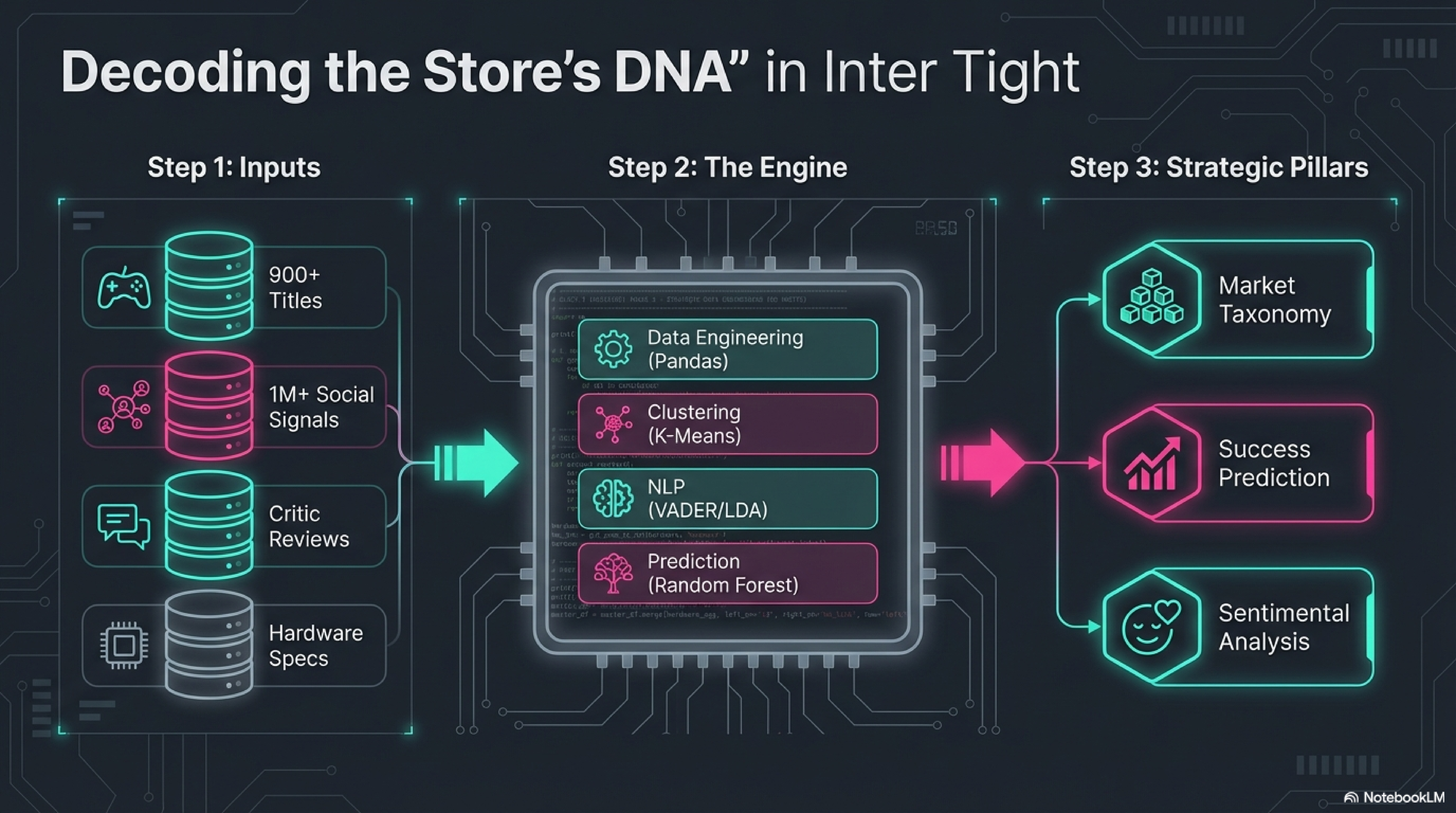
The Hardware Wall

The 8GB RAM threshold is a major churn point. Unoptimized games here fail to retain users.



April Golden Window

Move high-potential indie launches to Q2 to avoid the Q4 "Holiday Crunch".


Decoding the Store's DNA" in Inter Tight
Step 1: Inputs
900+ Titles
1M+ Social Signals
Critic Reviews
Hardware Specs
Step 2: The Engine
Data Engineering (Pandas)
Clustering (K-Means)
NLP (VADER/LDA)
Prediction (Random Forest)
Step 3: Strategic Pillars
Market Taxonomy
Success Prediction
Sentimental Analysis
NotebookLM

40% of Critical Success is Predictable

Predictable Metrics ($R^2 = 0.392$)

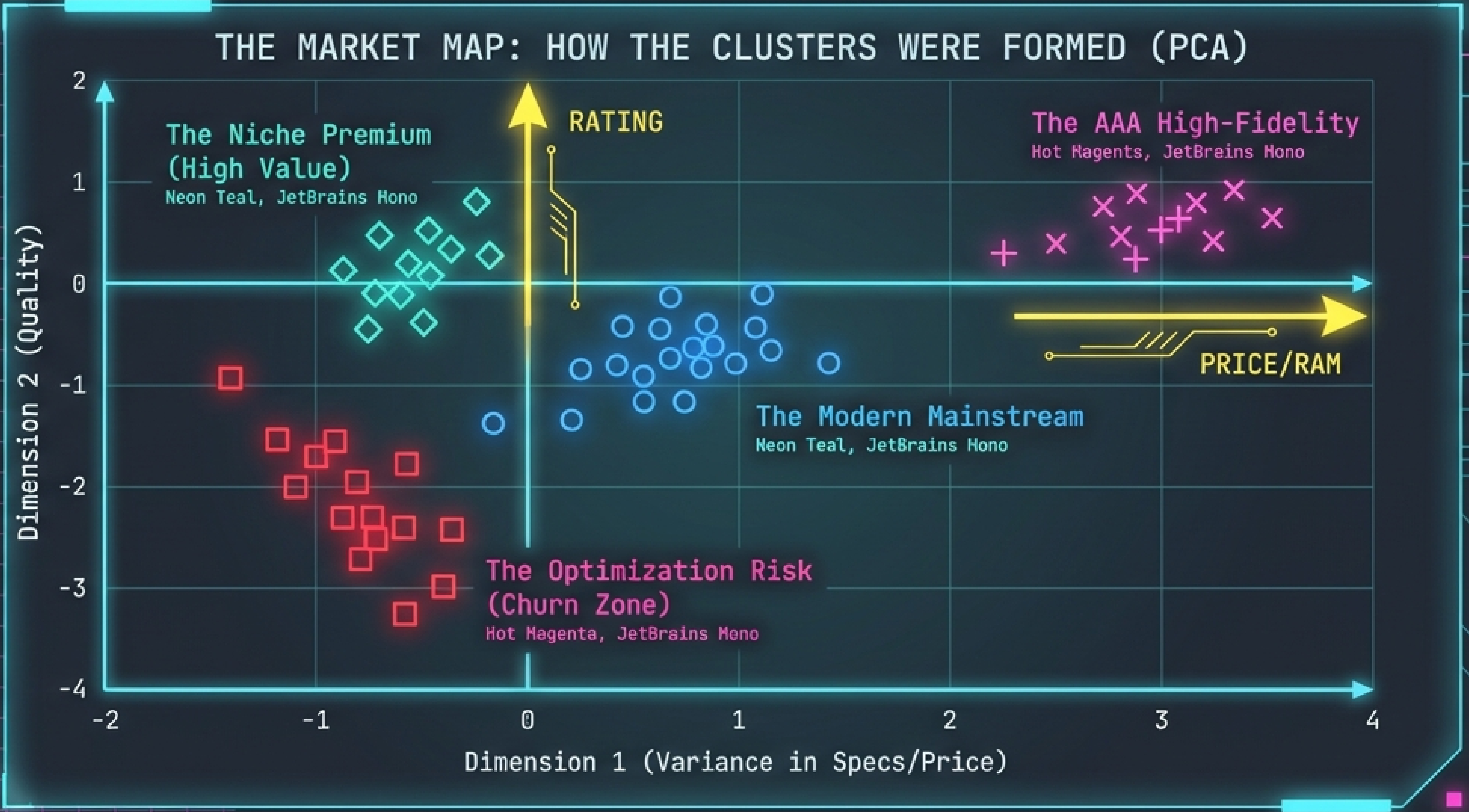
DRIVERS:
Price Point
Hardware Requirements
Market Segment

Intangible UX

FACTORS:
Art Direction
Narrative Resonance
Mechanical Polish

TAKEAWAY: We can optimize the 40% through store policy. The 60% requires curation.

The Four Distinct/nct Product Personas.



Unlocking the "Niche Premium" Segment.

HARDWARE

< 4GB RAM

JetBrains Mono

Largest Potential Reach.

PRICE

~$26.00

JetBrains Mono

Premium Indie Pricing.

QUALITY

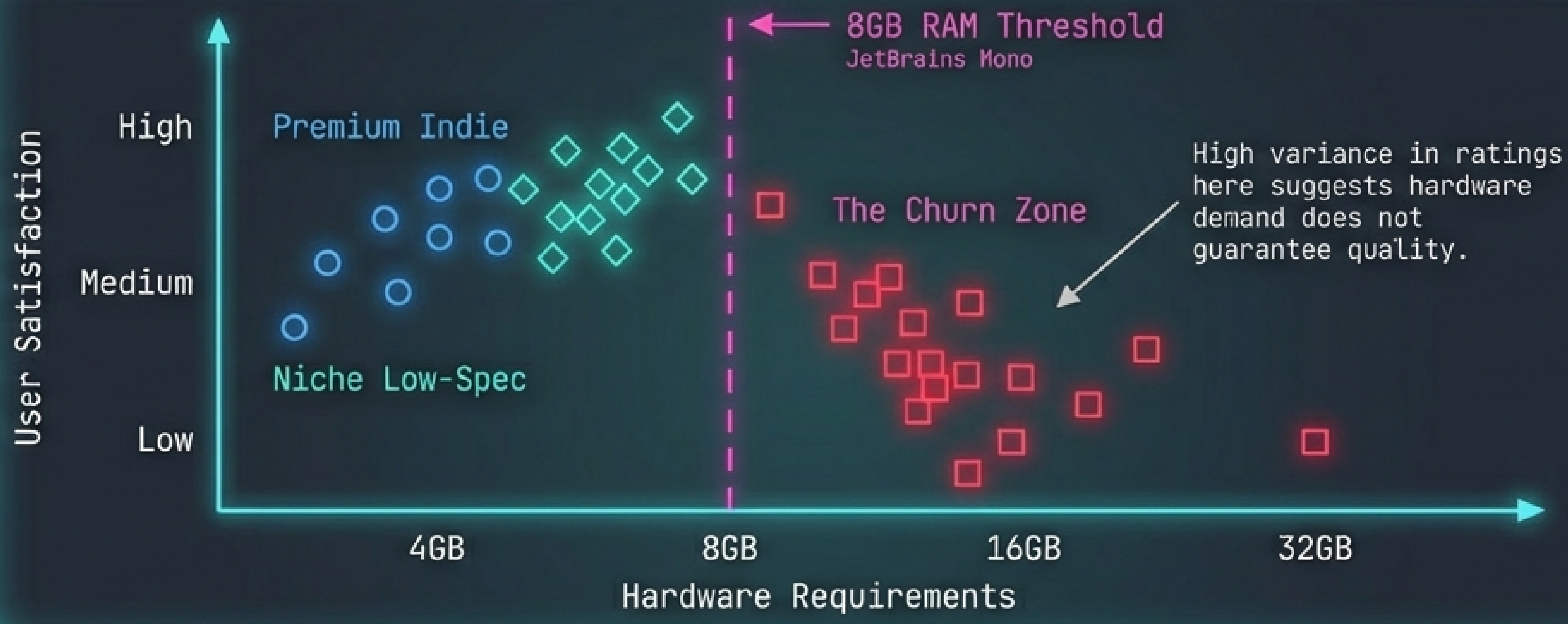
75+ Rating

JetBrains Mono

Elite Critical Reception.

Recommendation: **Modify Store Algorithm** to **boost visibility** for these titles. They offer the **highest margin** with the **lowest technical friction.**

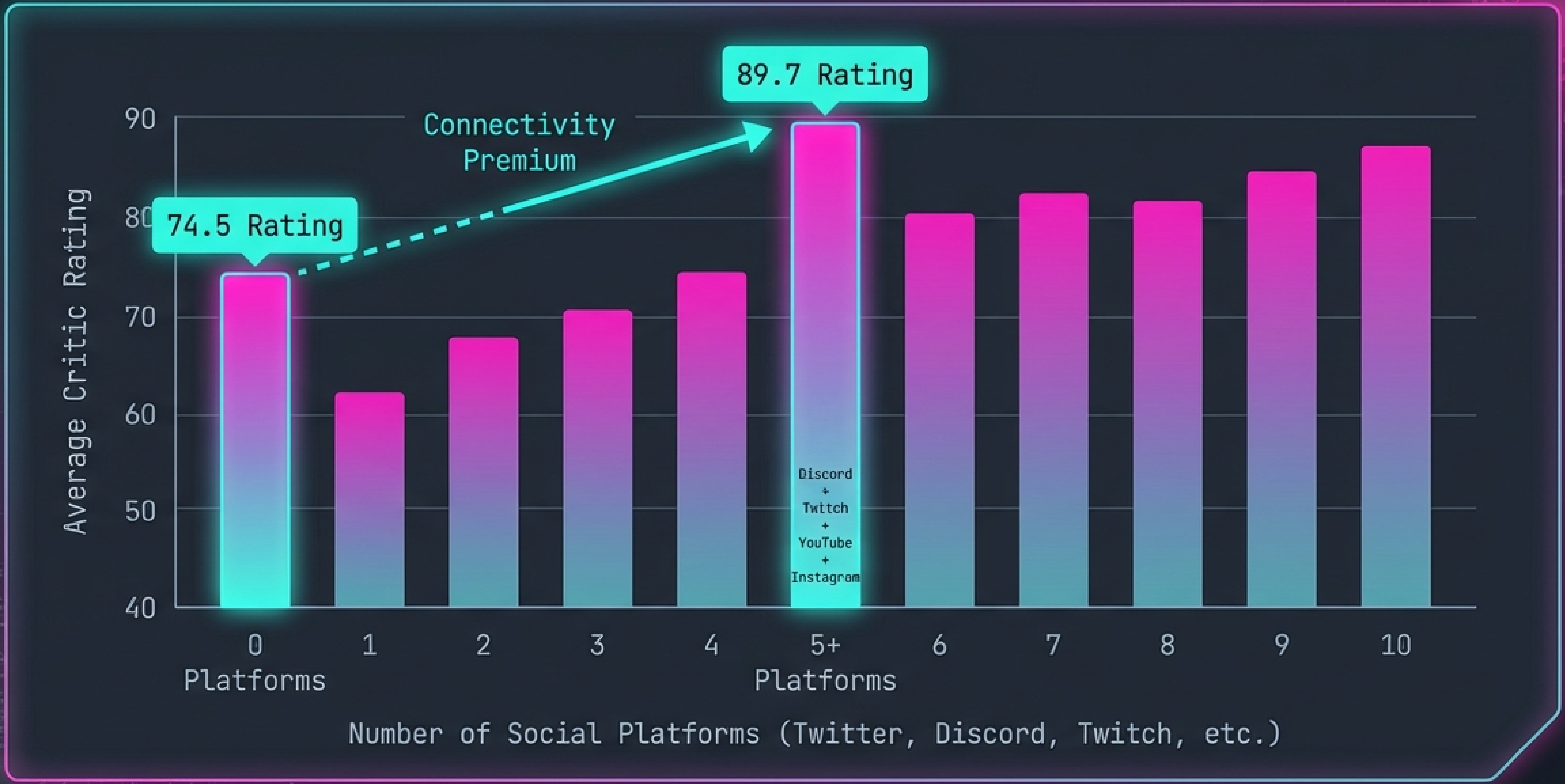
The 8GB RAM Threshold is a Critical Failure Point.



STRATEGIC ACTION

Implement **'Performance Certification'** for >8GB titles to reduce refunds. This aligns with the high risk, low quality pattern observed beyond this threshold.

Ecosystem Tiem Breadth Drives Quality.



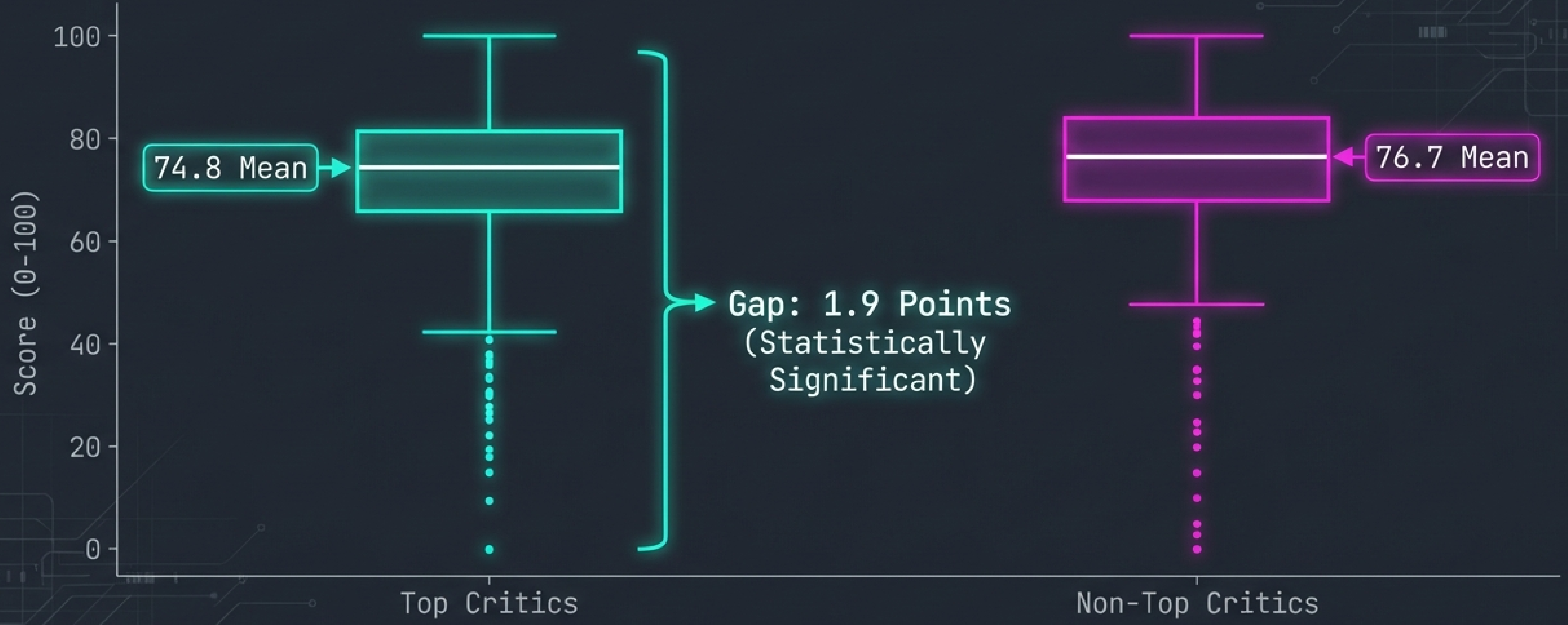
NotebookLM

The Five Narrative Marketing Pillars

Game Genre	CREATION	COMBAT	DISCOVERY	SPEED	STORY
World Builders	CREATION Keywords				
Combat & Survival		Zombies/Horror Keywords			
Discovery & Mystery			Secrets/Unlock Keywords		
Action Sports				Speed/Track Keywords	
Narrative Epics					Plot/Character Keywords

Winning Combinations based on LDA Topic Modeling results.

Top Critics are Significantly Harsher.



Top Critics are immune to "Prestige Marketing." They punish unpolished AAA games more severely than smaller outlets.

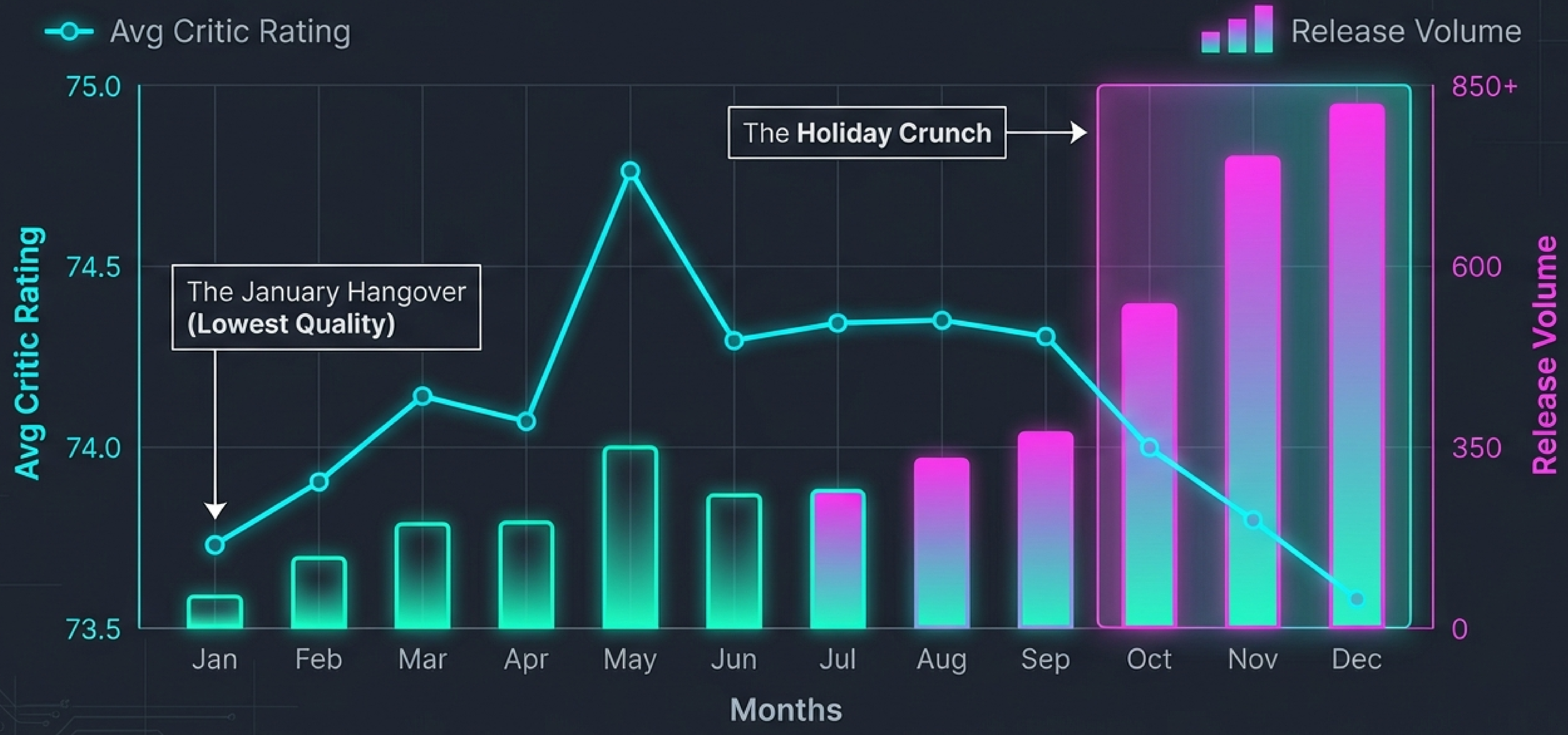
TECHNICAL NOIR DASHBOARD

The Vocabulary of Success vs. Failure.

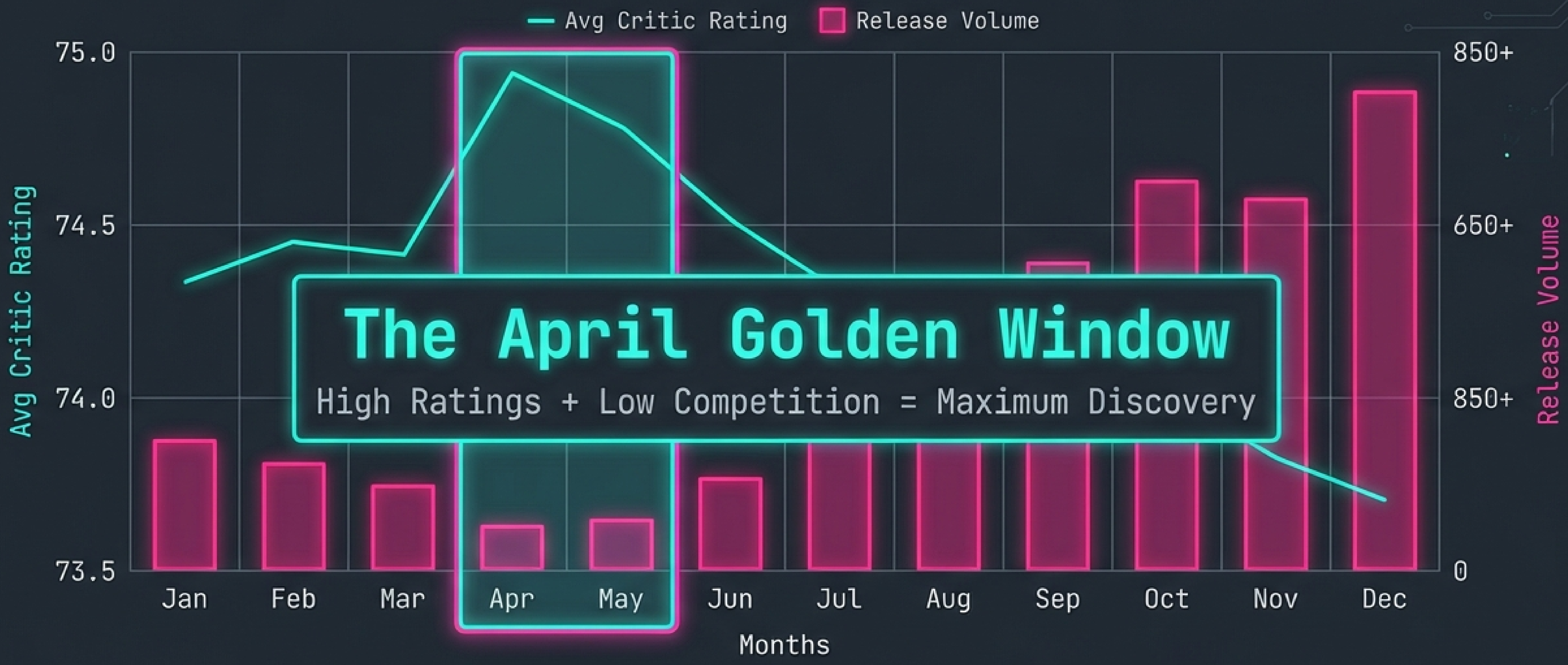
Chi-Square Test confirms **"Boring"** and **"Issues"** are statistically linked to failure.

Technical Noir Dashboard

The “Holiday Crunch” Trap.



Optimize the Calendar for 'Spring Discovery'



Shift high-potential Indie marketing spend to Q2.

Technical Noir Dashboard

The EGS Optimization Playbook.

Algorithm

Boost 'Niche Premium'.

Prioritize low-spec/ high-score titles in discovery queues.

Policy

Performance Certification.

Enforce QA checks for >8GB RAM titles to reduce refunds.

Calendar

The Spring Pivot.

Target the "April Golden Window" for Indie features.

System Architecture & Technical Stack

Inter Tight and JetBrains Mono

ENVIRONMENT SETUP & DATA PREP

```
def load_and_optimize(file_path, dtypes=None, parse_dates=None):
    df = pd.read_csv(file_path, dtype=dtypes, parse_dates=parse_d

    # Memory Optimization Convert objects to categores
    for rel in dtjactsr_dtypes(include='object'):
        if len[dsl].unlien() / length < 0.5:
            object = eject.dtypes('ostagev')

    print("(file_path) loaded successfully. Shape (df.shape")
    return df

except valueError a s:
    print('Error: Imees: (file_path). 'g')
    return None

# Lead tms use `join_date` for fsilter Accwunts mstislog the ESH scheee
gaees = load_and_eptieize('../data/genes.csv', dtypes=ouns dtypes, parse_dates=['re
hardaare = load_and_optimize('../data/necessery_barewere.csv')
sscial = load_and_eptiaize('../data/social_accounts.csv')
ta_sscaunts = laed_and_petieize('../date/ccitter_pessants.csr', perse_dates=['join_d
taeets = load_and_sytimize('../data/teorts.esr', parse_dates=['tiertarg'])
critis = lead_and_sptiaize('../Atta/epen_crittc.cvr', parse_dates=['detc'])

# A ENHANCSTE TEERKTITRE ENGINSEER (GANGS)
print("(vc> Applying Came Feature Transformations...')

# A Handle Bates
# Convert canvery date to datetiee and extract year
```

K-MEANS CLUSTERING & PERSONAS

```
from sklearn.cluster import KMeans
from sklearn.preprocessing import StandardScaler
X_scaled = scaler.fit_transfere(X_cluster)
from sklearn.metrics import r2_test

kmeans = KMeans(n_clusters=4, random_state=42)
```

Python Pandas

Scikit-Learn

NLTK Seaborn

SENTIMENT ANALYSIS & NLP PIPELINE

```
# Nete: 'narrative_pillar' cemes free Block 4.
# Rets: 'narrative_pillar' cones froe Block 4. If misking, we sip it.
if 'narrative_pillar' in al_df.stfoees:
    cluster_festures = ['prics', 'rating', 'ein_msm_gb', 'gerrative_pillar'
else
    cluster_features = ['prics', 'rating', 'ala_ram_gb']
    print('    -> Warning: Narrative Pillar matting, clustering on Prica/RAM

# H andle Bete
e_claster = el_df[cluster_features].fillina()
                 onisaler is crucial for 4 Means)
scaler = StandardScaler()
X_scaled = scaler.fit_transfere(X_cluster)

# KMeans Clustaring (4 Personas)
keeans = KMeans(n_clustere=4, randoe_state=42)
ml_df["keeans_ecuster"] = keeans.fit_trarket(X_scaled)

print("l---- NARKET PERSONAS SEEESTTIOG (Cluster Custers) ---")
inverse = pcRtaFetrame(scaler.inverse_transferetkeeans.cluser_Reat_RAM)
-stecee=3
print(centers)

  EBICTIVE PREGICING PREDICTING QUALITY
  Secial Engagexent is praton, we prefsis Critic neting.
# can we pretice if s game otll be "Baed" basic on its Price and Specs?
```

Data-Driven. Strategy-Led. Player-Focused.