Vertigo Games – Data Analyst Case Study

Full Case Summary – Eren Keçeci

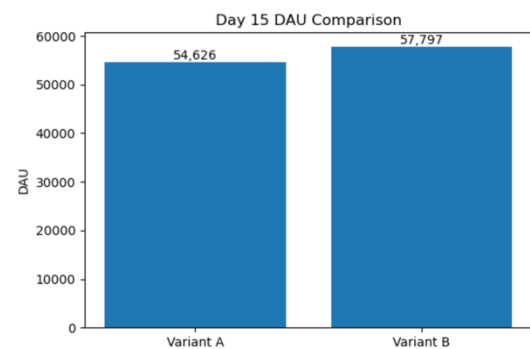**TASK 1 — A/B Test Modeling Summary**

Purpose

To compare Variant **A** and **B** in terms of Day 15 DAU, short-term and long-term revenue, sale impact, and new user source uplift — and determine which variant performs better under each condition.

Key Findings (Task 1)

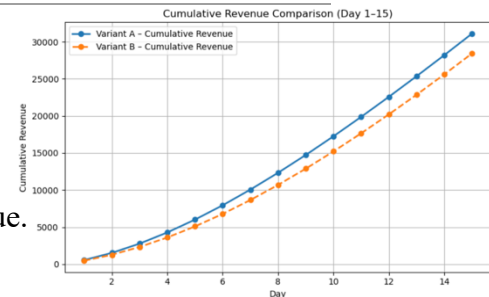**(a)** Which variant has the most Day 15 DAU?

Winner: Variant B

- Stronger mid/late retention (D7–D14).

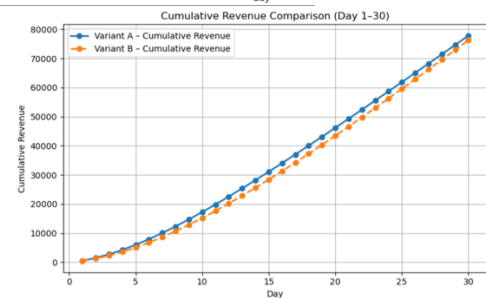**(b)** Which variant earns the most total money by Day 15?

Winner: Variant A

- Higher impressions per user → significantly higher ad revenue.

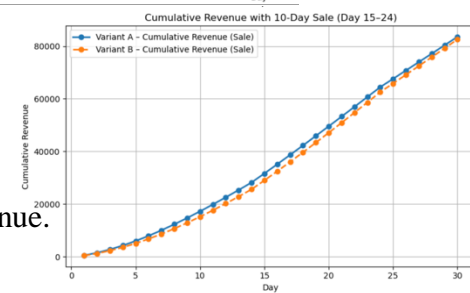**(c)** Which variant earns the most total money by Day 30?

Winner: Variant A

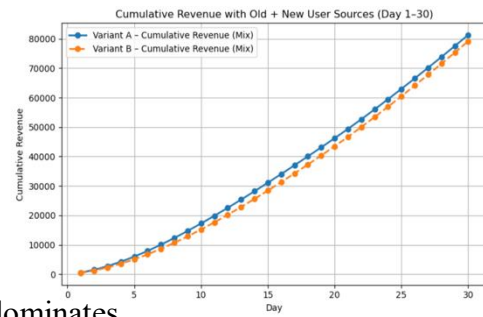- Its monetization advantage compounds over time.

(d) Does the 10-day sale change the outcome?

Still Winner: Variant A

- B gets more incremental IAP, but A remains ahead in total revenue.

Cumulative Revenue with Old + New User Sources (Day 1-30)

(e) With a new user source (Day 20+), which variant wins by Day 30?

 Winner: Variant A

- New players only age ~11 days → A's monetization strength dominates.

(f) If only one improvement can be made, which should be prioritized?

 Add the new permanent user source

- Long-term DAU growth
- Compounding revenue
- Healthier matchmaking pools
- More stable ad ecosystem

**TASK 2 — Player Behavior & Monetization Summary**

Purpose

Analyze 30 days of gameplay logs to understand:

- Early engagement's impact on long-term retention
- Platform & country monetization differences
- Skill behavior
- Session patterns
- Onboarding transitions
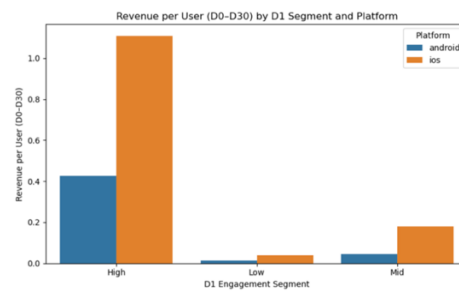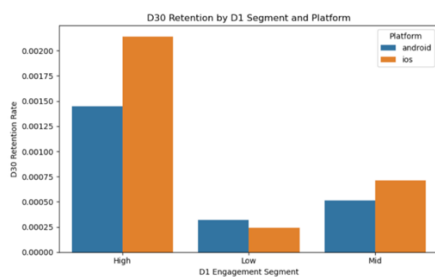- System frictions (errors, fatigue)

Key Findings (Task 2)

1. First-day engagement predicts long-term value

- High D1 users generate **2–3× more revenue**
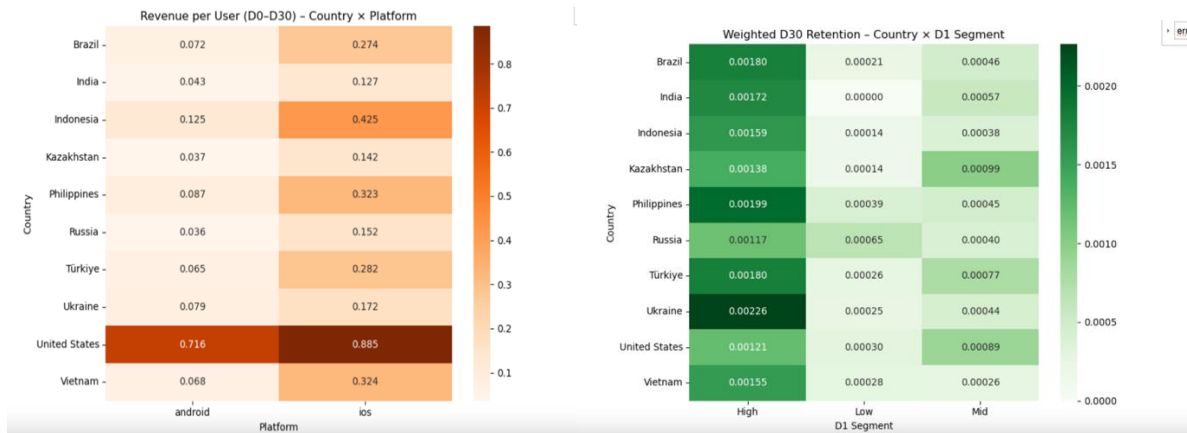- Low D1 users rarely survive past D7

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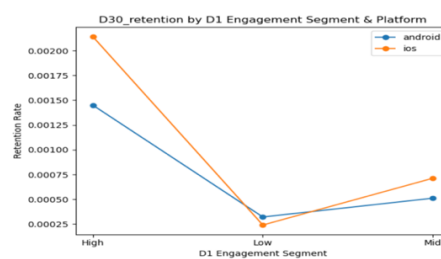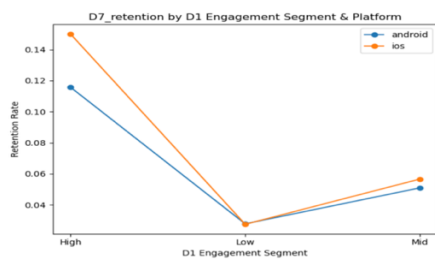
2. iOS users are more valuable

- Higher retention
- Higher ARPU
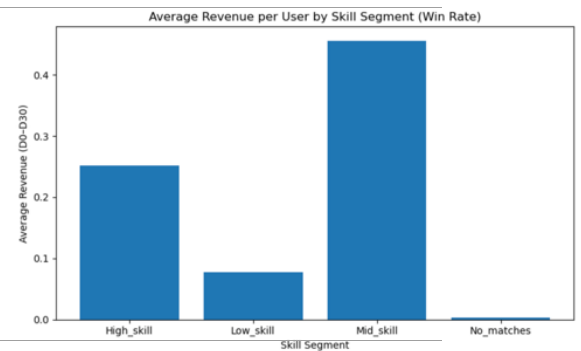- Stronger monetization across all segments

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3. Monetization differs sharply by country

- Brazil, Turkey, India → **high volume / low ARPU**
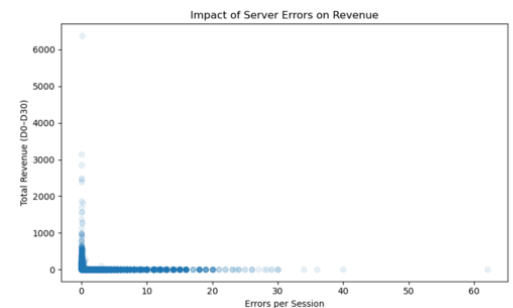- US, Vietnam, Indonesia → **high ARPU (IAP-driven)**

4. Skill segmentation reveals optimal difficulty

- **Mid-skill** players monetize the most
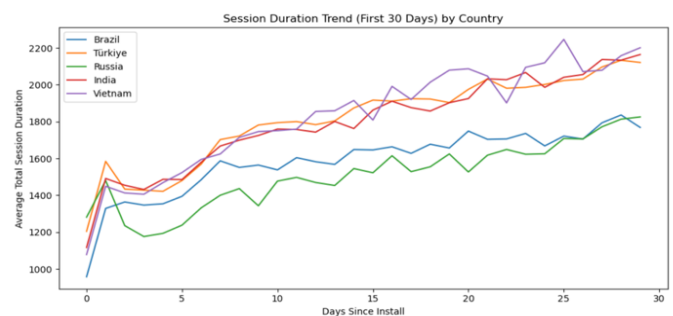- High-skill churns slower but spends less

5. Server errors reduce revenue

- Negative correlation between error rate and revenue
- Particularly harmful for Android low-engagement players

6. Session duration declines after Day 5

- Early spike → fatigue → plateau
- Decline steeper on Android

7. Low → Mid Conversion Funnel

- ~75% of Low D1 users transition to Mid/High by Day 2–3
- Converted users show **2× higher D30 retention**