Business Case Study: Driving Content Strategy and Audience Retention with AI at STARWAVE Entertainment

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Company Profile

STARWAVE Entertainment is a fast-growing digital streaming company based in Europe, offering original series, films, documentaries, and live events. The platform has 20 million monthly active users across 15 countries and generated 850 million in revenue last year. STARWAVE competes with global leaders by focusing on local content and advanced personalization.

Departmental Focus: Content Strategy and User Experience

To enhance viewer engagement and reduce churn, STARWAVE is investing in AI to improve both creative and operational decisions. The key areas of focus include:

- **Content Strategy:** Optimize recommendations and greenlighting of new shows using viewer data and sentiment analysis.
- **User Experience:** Improve UX through predictive personalization and intelligent marketing automation.

Challenge

The leadership team wants to apply AI across the full user journey, from content discovery to post-viewing behavior. Goals include:

- Reducing viewer churn
- Improving binge-watching predictions
- Identifying underperforming content before contract renewals

Proposed AI Integration

The AI strategy consists of:

- **Behavior Prediction:** Use sequential models (e.g., LSTM) to forecast viewer session behavior.
- **Recommendation Engines:** Hybrid collaborative and content-based filtering.
- **Content Intelligence:** NLP-based analysis of user reviews and subtitle data.

Implementation Plan

- **Q1:** Consolidate viewer interaction logs, title metadata, and social media mentions
- **Q2:** Train viewing behavior models and sentiment classifiers
- **Q3:** Deploy new recommendation engine and dynamic interface elements
- **Q4:** Integrate analytics into content renewal and acquisition workflows

Expected Impact

- Reduce annual churn by 12%
- Improve episode recommendation accuracy by 25%
- Cut investment in low-performing content by 15%

Fictional Financials

Balance Sheet – End of Year (in millions)

Assets	**Current Year**	**Previous Year**
Cash	120	95
Content Library (IP)	480	460
Equipment and Platforms	210	190
Accounts Receivable	90	85
Total Assets	**900**	**830**
Liabilities & Equity		
Content Licensing Payables	250	230
Debt	200	180
Deferred Revenue	100	90
Shareholder Equity	350	330
Total Liabilities & Equity	**900**	**830**

Profit and Loss Statement (in millions)

Item	Current Year	Previous Year
Subscription Revenue	700	640
Advertising Revenue	100	90
Content Licensing Revenue	50	45
Total Revenue	**850**	**775**
Content Acquisition Costs	450	420
Platform R&D Expenses	120	110
Operating Profit	**280**	**245**
Taxes	56	49
Net Profit	**224**	**196**

Data Challenge: Personalized Viewing and Intelligent Content Strategy

STARWAVE provides students with access to synthetic data representing:

- **Structured:** Viewing logs, user profiles, content tags
- **Text:** User reviews, subtitle files, social media comments
- **Images/Video:** Thumbnail engagement, promo clip performance
- **Time Series:** User session times, viewing duration

Objectives: Students must:

1. Choose a challenge: churn modeling, recommender design, hit prediction, review summarization
2. Select appropriate AI techniques: regression, deep learning, NLP, reinforcement learning, unsupervised clustering
3. Propose preprocessing, feature engineering, and model validation strategies
4. Suggest Python libraries (`surprise`, `spaCy`, `transformers`, `Plotly`, `Keras`, `Pandas`)
5. Recommend data visualizations for marketing and content teams

Bonus: Design a dashboard wireframe showing real-time recommendation feedback and engagement stats.

Discussion Questions

1. How can STARWAVE balance personalization with content discovery?
2. What biases may exist in content recommendation engines?
3. How can STARWAVE ensure diversity and fairness in content exposure?
4. What are the privacy implications of deep viewer profiling?

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