Business Analytics Capstone Framework for Strategy

Tang Shi Rong

28 March 2025

Problem Statement

Problem Statement–

Describe the Problem Adblockers present to GYF

GoYaFace, Inc. (GYF) generates a significant portion of its revenue from digital advertising across its core business units: GYF Search, GYF Mail & Chat, and GYF Digital Media. With the increasing adoption of adblockers by internet users, GYF faces critical challenges in maintaining its advertising revenue, which is essential for sustaining its free digital services.

Adblockers disrupt GYF's ability to deliver ads across its platforms, particularly affecting:

1. **Revenue Loss (Operations)** – A substantial percentage of users employ adblockers, directly reducing ad impressions and click-through rates, leading to declining ad revenues. Given that mobile advertising now accounts for 70% of GYF's total digital ad revenue, mobile adblocking is a particularly pressing issue.

2. **Advertiser Impact (Ad-buying Clients)** – The effectiveness of GYF's advertising programs is diminished as ads fail to reach target audiences. This could lead to advertisers reallocating budgets to competitors with lower adblocker penetration.

3. **User Engagement & Experience (Users)** – While some users employ adblockers to improve browsing experience by reducing intrusive ads, GYF must balance ad revenue needs with user satisfaction. Implementing countermeasures, such as restricting content access for adblock users, may risk alienating a portion of its audience.

4. **Competitive Disadvantage** – Competitors like Google, Microsoft, and Facebook are actively developing strategies to mitigate adblocker impact, including native advertising, adblock circumvention technology, and partnerships with adblock developers. GYF must explore similar or superior solutions to remain competitive.

Problem Statement–

To develop an effective strategy for mitigating adblocker impact, GYF's DATA Team should employ a mix of **exploratory, descriptive, and causal research** approaches:

1. **Exploratory Research** – To gain insights into the motivations and behaviors of both advertisers and end-users regarding adblocking. This will help uncover potential solutions and alternative monetization strategies.

2. **Descriptive Research** – To quantify the extent of adblocking's impact on GYF, including its effect on revenue, user engagement, and advertiser retention.

3. **Causal Research** – To determine cause-and-effect relationships, such as how different ad formats or anti-adblock strategies influence user behavior and advertiser engagement.

   Research Methods include:

1. **Surveys (Traditional & Mobile)**
2. **Social Media Analytics**
3. **Mobile Data Analytics**
4. **A/B Testing**
5. **Customer Self-Reporting**

Strategy

1. Native Advertising & Sponsored Content

- **Solution:** Integrate ads seamlessly into GYF Digital Media content (e.g., GYF News, GYF Sports) in the form of **sponsored articles, videos, and product placements**.

- **Why It Works:** Adblockers typically target traditional banner ads and pop-ups, but native ads blend into editorial content and are harder to block.

2. Anti-Adblock Strategies

- **Detection & Countermeasures:**

  - Implement scripts that **detect adblockers** and ask users to disable them.

  - Offer a **"light" ad version** for users who allow some advertising.

  - Block access to premium content for users with adblockers.

- **Why It Works:** Encourages users to whitelist GYF or subscribe for an ad-free experience (see next point).

3. Ad-Free Subscription Model

- **Solution:** Offer a **GYF Premium** plan that removes ads across GYF Search, Mail, Chat, and Digital Media.

- **Why It Works:** Some users prefer to pay a small monthly fee rather than seeing ads. This creates an alternative revenue stream.

1. Native Advertising & Sponsored Content

- **Objective:** Increase ad visibility and effectiveness by integrating ads seamlessly into content, minimizing the likelihood of adblocking.

- **Objective:** Enhance user experience by presenting ads in a less intrusive and more engaging format.

- **Objective:** Boost advertiser confidence and investment by offering ad formats that are harder to block.

2. Anti-Adblock Strategies

- **Objective:** Detect adblocker usage and encourage users to disable them through prompts or access restrictions.

- **Objective:** Minimize revenue loss by persuading users to whitelist GYF sites or opt for a lighter ad experience.

- **Objective:** Balance user satisfaction with maintaining ad revenue by offering customizable ad settings.

3. Ad-Free Subscription Model

- **Objective:** Create a reliable alternative revenue stream by offering an ad-free premium subscription.

- **Objective:** Retain adblocker users by giving them a choice to either view ads or pay for an ad-free experience.

- **Objective:** Improve user retention and satisfaction among those who prefer ad-free browsing.

Key Considerations for Hiring Decision

1. **Relevance to GYF's Adblocking Challenge:**

    ○ **Peggy has direct experience** handling adblocker-related issues in digital media, while Carrie has a strong marketing background but little exposure to ad-selling.

    ○ Since GYF needs a leader who can **strategize against adblockers**, Peggy's knowledge gives her an edge.

2. **Strategic Fit & Team Collaboration:**

    ○ **Peggy's personality** (detail-oriented, team player) aligns well with the **collaborative problem-solving** needed for digital advertising challenges.

    ○ While Carrie is goal-driven and creative, her structured interview responses suggest she may not always focus on the **most relevant business issues**.

3. **Cognitive Ability vs. Job Knowledge:**

    ○ Carrie has a **higher cognitive ability score (90%)**, which suggests strong analytical thinking.

    ○ However, Peggy **excels in job knowledge**, meaning she can apply her knowledge to real-world challenges at GYF **without a steep learning curve**.

4. **Long-Term vs. Short-Term Thinking:**

    ○ Peggy's reference indicated she can sometimes be "too focused on the short term."

    ○ This is a minor concern but can be managed by ensuring she aligns with **long-term strategic goals**.

Final Recommendation: Hire Peggy Prospect

Why Peggy?

- **Direct experience with adblocking solutions** in digital media.

- **Stronger job knowledge** and immediate applicability to GYF.

- **Excellent structured interview**—good team fit, deep industry knowledge.

- **Detail-oriented and collaborative**, making her a good leader for the DATA team.

Potential Risks & Mitigation

- **Short-term focus?** → Provide mentorship and ensure long-term strategic alignment.

- **Lower cognitive ability than Carrie?** → Encourage data-driven decision-making through structured frameworks.

Conclusion

Peggy Prospect is the **best choice** for Senior Associate Director of Digital Advertising Strategy due to her **direct industry experience, job knowledge, and strong team fit**, making her more likely to drive **effective adblocking solutions for GYF**.

Effects and Measurement

Effects

Describe the anticipated effects of your strategy

Strategy 1: Ad-Blocker Detection and Adaptive Content Delivery

Anticipated Effects:

1. **Increased Ad Visibility:**

   ○ By detecting ad-blockers and using adaptive content delivery, GYF can serve ads even when users have blockers enabled.

   ○ Estimated increase in ad visibility by 20-30%.

2. **Improved User Experience:**

   ○ By showing less intrusive or native ads when blockers are detected, user satisfaction may improve.

   ○ Reduced risk of alienating users by understanding their ad preferences.

3. **Higher Revenue:**

   ○ As more ads are displayed despite blockers, revenue from ad impressions and clicks will increase.

   ○ Estimated revenue increase of 15-20% from previously blocked impressions.

Effects
Describe the anticipated effects of your strategy

Strategy 2: Incentivizing Users to Whitelist GYF

Anticipated Effects:

1. **User Engagement:**

   ○ By offering content perks or ad-free experiences as incentives, GYF can encourage users to whitelist the platform.

   ○ Expected increase in whitelist rates by 10-15%.

2. **Enhanced Brand Loyalty:**

   ○ Users who whitelist the site in exchange for benefits feel more connected and valued, boosting brand perception.

   ○ Increased retention and positive brand associations.

3. **Ad Revenue Recovery:**

   ○ As more users disable ad-blockers, ad viewability and click-through rates improve.

   ○ Projected ad revenue recovery of 10% from the whitelisted audience.

Effects

Describe the anticipated effects of your strategy

Strategy 3: Native Advertising and Content Integration

Anticipated Effects:

1. **Seamless User Experience:**

   ○ Native ads that blend with the content are less likely to be blocked and perceived as intrusive.

   ○ Increased user tolerance and engagement with ads.

2. **Better Ad Performance:**

   ○ Higher click-through rates (CTRs) due to the relevance and non-disruptive nature of native ads.

   ○ Estimated CTR increase of 20-25% compared to traditional ads.

3. **Revenue Diversification:**

   ○ In case traditional ads continue to face ad-blocker challenges, native advertising provides a stable alternative revenue stream.

   ○ Diversification reduces financial dependency on a single ad format.

Effects

Application Exercise 3 – Designing a Deterministic Optimization Model

- *Constraints*
    - *Total dollars allocated <= 65000*
    - *Sumproduct of hard skills money with the weights >=20000*
    - *Sumproduct Soft Skills Money with Weights >=12000*
    - *Sumproduct Internal Money with weights >= 60%* sumproduct external money with weights*

- *Variables : Amount to be allocated for each program*

- *Optimised Results:*

Training Type	Budget Allocation ($)	Productivity Return Rate	Productivity Increase ($)
Hard Skills - Internal (x1)	0	0.2	0
Hard Skills - External (x2)	45000	0.7	31500
Soft Skills - Internal (x3)	20000	0.6	12000
Soft Skills - External (x4)	0	0.4	0

Description	Formula		
Total Budget	65000		
Total Productivity Return	43500		
Hard Skills Return	31500		
Soft Skills Return	12000		
Internal-External Balance	12000		

Measurement
Describe the anticipated effects of your strategy and how you will measure them

1. Ad-Blocker Detection and Adaptive Content Delivery

KPIs:

- **Ad Visibility Rate:**
  - *Formula:*

$$\text{Ad Visibility Rate} = \frac{\text{Number of ads displayed}}{\text{Number of ad requests}} \times 100$$

  - *Measurement:* Use analytics tools to compare visibility rates before and after implementing adaptive content delivery.

- **Ad Revenue Increase:**
  - *Formula:*

$$\text{Revenue Increase} = \frac{\text{Post-implementation revenue} - \text{Pre-implementation revenue}}{\text{Pre-implementation revenue}} \times 100$$

  - *Measurement:* Track revenue from ad impressions and clicks using GYF's ad performance dashboard.

- **User Engagement Rate:**
  - *Formula:*

$$\text{Engagement Rate} = \frac{\text{Number of interactions with adaptive ads}}{\text{Total adaptive ads shown}} \times 100$$

  - *Measurement:* Analyze interaction data for adaptive ads compared to regular ads.

Measurement
Describe the anticipated effects of your strategy and how you will measure them

2. Incentivizing Users to Whitelist GYF

KPIs:

- **Whitelist Rate:**

  - *Formula:*

$$\text{Whitelist Rate} = \frac{\text{Number of users who whitelisted}}{\text{Total users with ad-blockers}} \times 100$$

  - *Measurement:* Track the number of users who whitelist the platform after receiving incentives.

- **Increase in Ad Impressions:**

  - *Formula:*

$$\text{Increase in Ad Impressions} = \frac{\text{Post-whitelist impressions} - \text{Pre-whitelist impressions}}{\text{Pre-whitelist impressions}} \times 100$$

  - *Measurement:* Monitor ad impressions before and after users whitelist GYF.

- **Retention Rate of Whitelisted Users:**

  - *Formula:*

$$\text{Retention Rate} = \frac{\text{Number of returning whitelisted users}}{\text{Total whitelisted users}} \times 100$$

  - *Measurement:* Use user analytics to track how many whitelisted users continue to visit regularly.

Wharton UNIVERSITY of PENNSYLVANIA ONLINE

Measurement

Describe the anticipated effects of your strategy and how you will measure them

3. Native Advertising and Content Integration

KPIs:

- Native Ad Click-Through Rate (CTR):
  - *Formula:*

$$\text{CTR} = \frac{\text{Number of clicks on native ads}}{\text{Number of native ad impressions}} \times 100$$

  - *Measurement:* Compare CTR of native ads versus traditional ads using ad analytics tools.

- User Sentiment and Feedback:
  - *Measurement:* Conduct user surveys and sentiment analysis to gauge perceptions of native ads.

- Revenue from Native Ads:
  - *Formula:*

$$\text{Native Ad Revenue Share} = \frac{\text{Revenue from native ads}}{\text{Total ad revenue}} \times 100$$

  - *Measurement:* Track revenue from native ad placements using GYF's financial reporting.

Measurement
Describe the anticipated effects of your strategy and how you will measure them

Data Collection and Analysis Tools:

- **Web Analytics (e.g., Google Analytics, Adobe Analytics):** Track ad impressions, CTR, user engagement, and ad visibility.

- **Ad Performance Dashboards:** Monitor revenue changes and ad-blocker detection effectiveness.

- **User Surveys and Feedback Forms:** Collect data on user perceptions and satisfaction.

- **A/B Testing Platforms:** Compare the performance of traditional versus adaptive/native ad formats.

- **Customer Data Platforms (CDPs):** Track returning users and engagement metrics.

Measurement

Hypothesis:

"Implementing targeted employee training programs (A) will enhance employee skill levels and efficiency (B), leading to improved customer satisfaction and increased revenue (C)."

Causal Chain:

- **A** → Invest in specialized training programs (hard skills & soft skills).

- **B** → Employees become more skilled, efficient, and engaged.

- **C** → Higher customer satisfaction, increased retention, and higher revenue.

Key Driver:

- Employee skill development is the primary driver of the strategy.

Measurement Approach:

- **Training Completion Rate:** % of employees completing each training module.

- **Employee Productivity Metrics:** Task completion time, error rates, and efficiency improvements post-training.

- **Customer Satisfaction Scores:** Surveys, Net Promoter Score (NPS), and customer retention rates.

Data Collection:

- Employee performance before and after training.

- Customer feedback and ratings over time.

- Revenue growth trends before and after implementation.

Verifying the Linkages

Verification Approach:

- **Pre/Post Analysis:** Compare employee performance and customer satisfaction before and after training.

- **A/B Testing:** Implement training for one group and compare their performance with an untrained control group.

- **Regression Analysis:** Analyze the correlation between training investment, productivity improvements, and revenue growth.

Expected Findings:

- If the hypothesis is correct, **higher training investments → higher employee efficiency → increased customer satisfaction → revenue growth**.

- If the linkages are weak, re-evaluate training content, delivery methods, or external market factors affecting revenue.

Conclusion

- *The pertinence of adapting to adblockers is paramount in ensuring GYF/s longevity.*
- *DATA Team needs to utilise different strategies and key metrics to be able to maximise profits, while at the same time scaling up GYF*
- *This case highlights the importance of data driven analytics to ensure the sustainability and survivability of a company*