# Research Vision:
# Data-driven Agents for Content Creation

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Adobe Research

# Agenda

Section

Vision

Why Adobe?

Research Area Declaration


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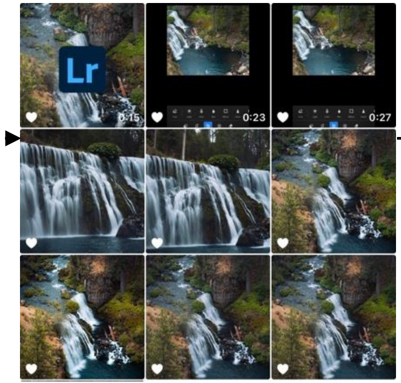
# Vision

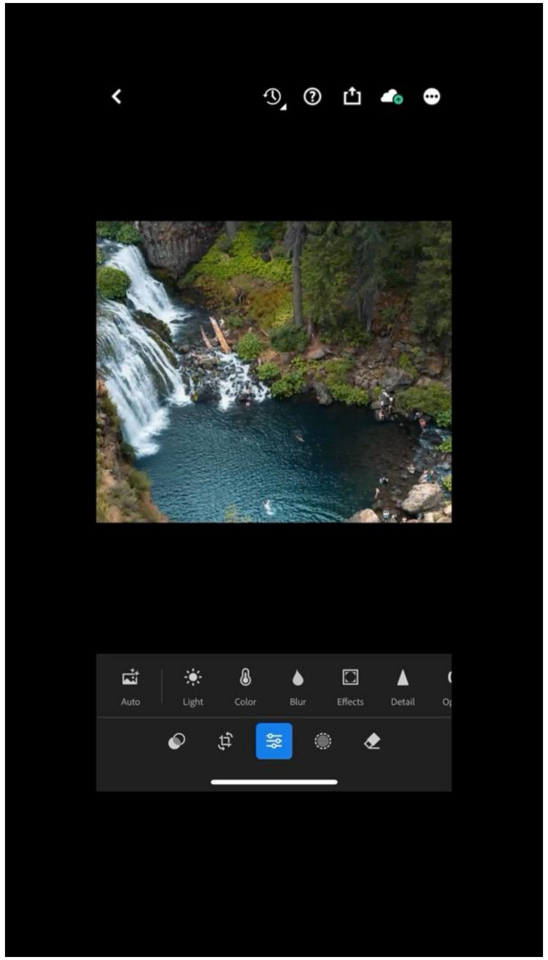



Images, screenshots, screenrecordings related to **editing a photo on LR**

promotional | informational

1. Video showing Before/after images
2. How-to process: detailed ✅
3. Fast-paced multiple before/after Highlighting different features
4. A photo montage of before-after images with feature

**Before** ⚠️





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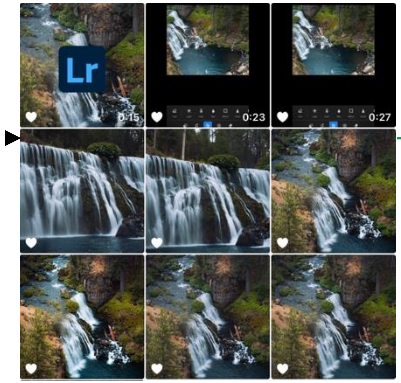
# Vision

Reflection on **best** possible Style of content based on user request



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1. Video showing Before/after images
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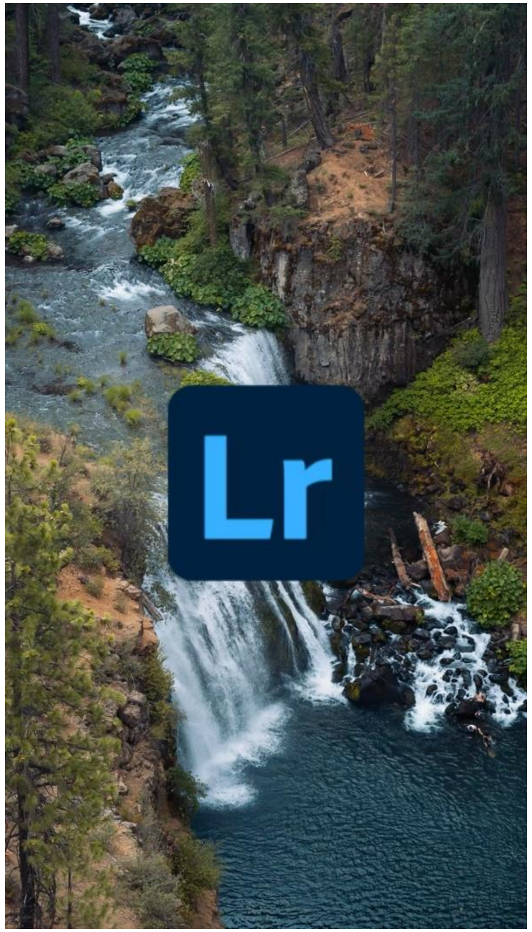
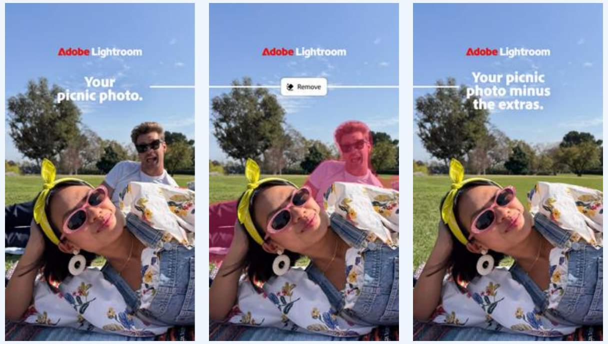
**After** 🏆



# Vision: More examples

- Create variations for ***different creative types or styles*** that resonate better *(as per data)*

Carousel




Story


Video

- ***Keeping style same, Create variations*** that resonate better *(as per data)*

For example: If "pet content" is doing better, remake same ad featuring generative remove with pets.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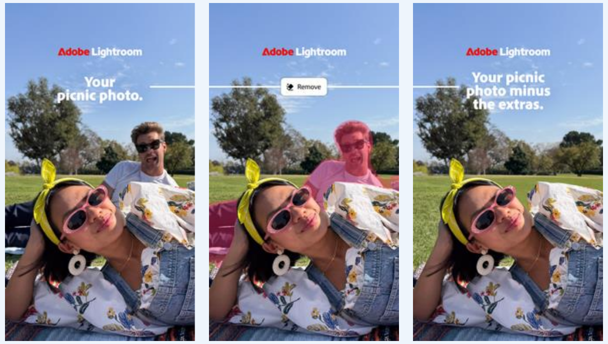
# Vision: More examples

- Create variations for ***different creative types or styles*** that resonate better *(as per data)*

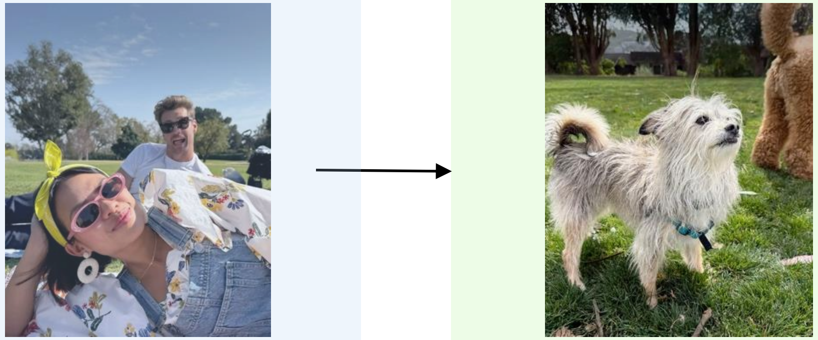
Carousel




Story


Video

- ***Keeping style same, Create variations*** that resonate better *(as per data)*



For example: If “pet content” is doing better, remake same ad featuring generative remove with pets.

# Vision

Imagine if **agents** could learn ***what*** makes these examples successful and ***automatically guide successful content creation***.



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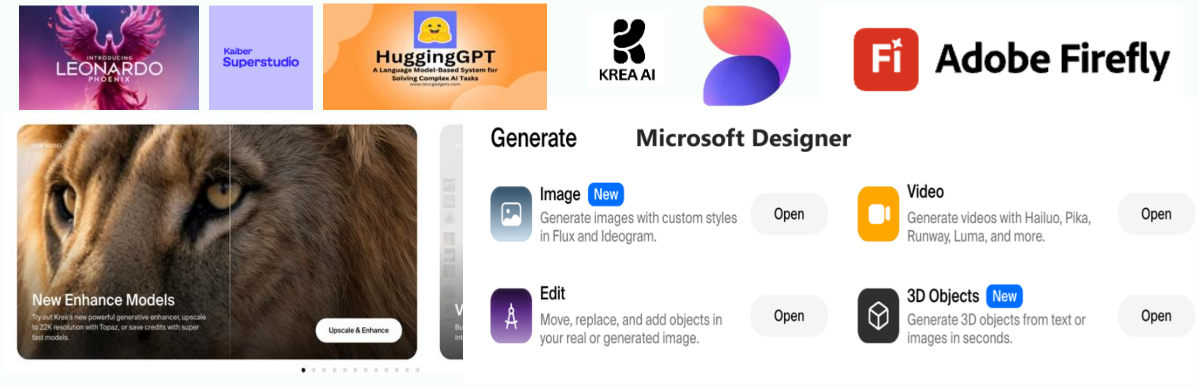
# Data-Driven Multimodal Agents for Creativity



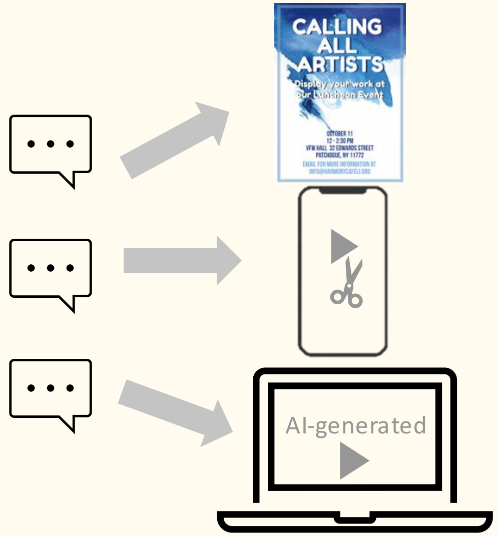

✅ automate complex content creation

❌ Missing:
***Data-driven*** *models to create engaging content*

Express Assistant

Silverscreen

Morpheus




🟡 Agents + tool use enable these richer workflows

# The Space of Edits: Why This Problem Is Hard

**Current MLLMs/VLMs:** Can perform low and some mid-level edits via prompting.

**Challenge:** They can simulate reason and *intent,* but ***why a change might engage a particular audience*** or convey the right narrative needs to be grounded in ***real performance <u>data</u>***

**High-level**
Story framing, emotional resonance, change hero persona, etc.

**Mid-level**
Text: wording, color, style, positioning
Visual: variable speed, sync to beat

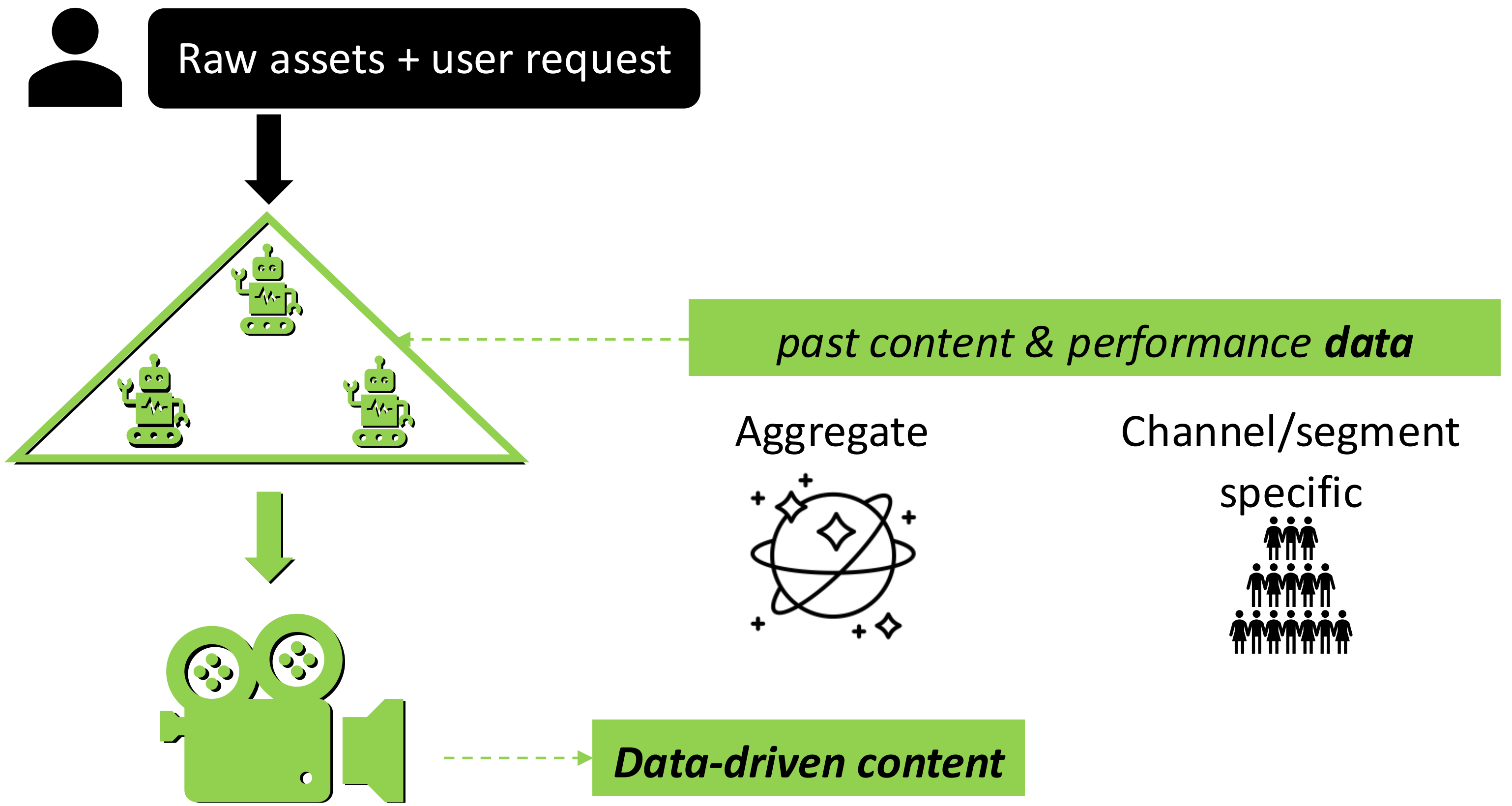
**Low-level**
Music, color, narration, clip trim

## *Why MLLM+data != data-driven*

*Knowledge-based reasoning* *vs.* Empirical grounding (correlation, causation, human bias)

# Data-Driven Multimodal Agents for Creativity

Can agents effectively understand & learn to generate ***data-driven*** content from **past performance?**
**that performs well across channels and audiences?**




- ✓ **What** content is performing well?
- ✓ **Why** is it performing well?
- ✓ **Can we create** content that performs well?
  - ✓ Winning ***Style***
  - ✓ Winning ***Creative type***
  - ✓ Winning key ***features***



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# Why Adobe ?

Adobe’s ecosystem uniquely connects content creation with its performance data — a closed loop few others can access.

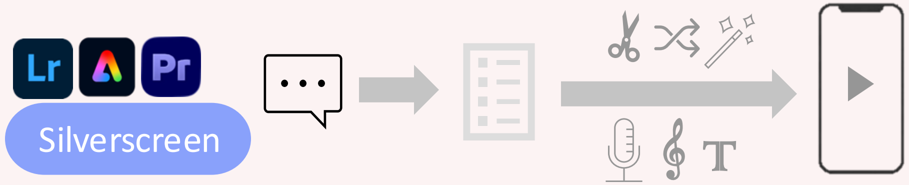
## For marketers

*To gain insights from engaging content*


- ✓ **What** content is performing well?
- ✓ **Why** is it performing well?
- ✓ **Can we generate marketing insights** from content that performs well to guide future campaigns?

## For content creators

*To create engaging content faster*




- ✓ **What** content is performing well?
- ✓ **Why** is it performing well?
- ✓ **Can we create content** that performs well?

# Why Adobe ? For marketers

**_Campaigns_**

**_Content_** **_Performance_**

| Facebook Ads | CTR | CPM | CPC | Impressions | Spend | Sourced ARR |
|---|---|---|---|---|---|---|
| Studio-NA-Q3Sliders-PresetsDoodle<br>Paid: Static | 0.39% | $4.52 | $1.15 | 8,991,861 | $40,682 | $40,916 |
| Studio-NA-Q3Sliders-PresetsDoodle<br>Paid: Video | 1.27% | $4.23 | $0.33 | 5,393,024 | $22,827 | $30,480 |
| Studio-NA-Q3Sliders-GenRemoveTerrier<br>Paid: Static | 0.41% | $4.13 | $1.02 | 2,560,021 | $10,572 | $12,791 |
| Studio-NA-Q3Sliders-GenRemoveTerrier<br>Paid: Video | 0.92% | $3.50 | $0.38 | 2,096,850 | $7,345 | $6,522 |
| Studio-NA-Q3Sliders-PresetsDoodle<br>Paid: Carousel | 0.42% | $4.75 | $1.14 | 1,736,091 | $8,241 | $9,345 |
| Studio-NA-Q3Sliders-GenRemoveTerrier<br>Paid: Carousel | 0.64% | $4.28 | $0.67 | 797,690 | $3,410 | $5,961 |

**GENSTUDIO**

**Insights**

*Insights from engaging content*

- ✓ **Helps** marketers, analysts and content creators ***with future campaigns***
- ✓ **What** content is performing well?

  **PresetsDoodle** Strongest CPC ad.

- ✓ **Why** is it performing well?

  **PresetsDoodle** Achieves highest CTR (1.8%) through universal emotional appeal (pet photography) + optimized 5-second pacing + clear before/after value demonstration, creating immediate connection.

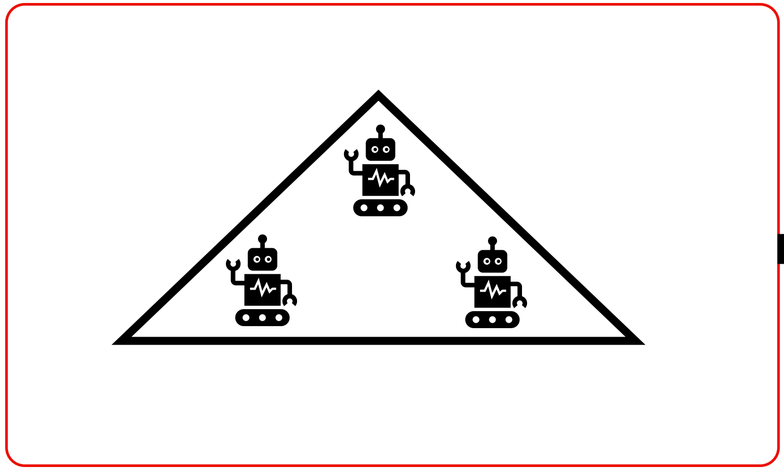
- ✓ **Can we guide future campaigns?**

Adobe

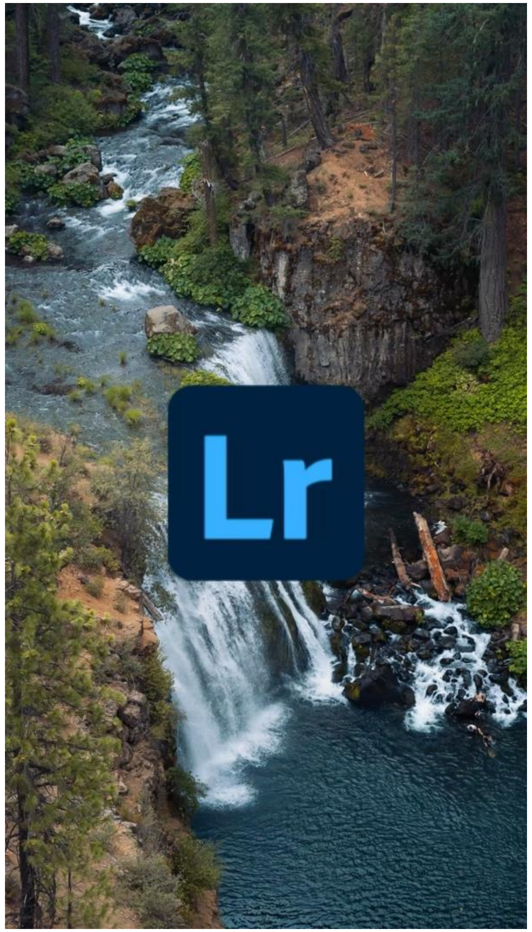
# Why Adobe ? For creators

*Create engaging content faster*

Make me a short video that best depicts my photo-editing process with Generative Remove



**MLLM AGENT**



- ✓ **Helps** content creators **create engaging content faster.**
- ✓ **What** content is performing well?

  Fast-paced multiple before/after shots style short-video highlighting the feature in the past has worked well for similar video styles

- ✓ **Why** is it performing well?

  First 10s that quickly demonstrate the feature, with upbeat music, fast-fade cuts drive engagement in content that perform well

- ✓ **Can we create** content that performs well?

# Research Area Declaration

## PROBLEM

No structured way to use performance data for understanding, evaluating and automating content creation

How to enable data-driven decision making in agents towards content-creation?

## MOTIVATION

Enabling Adobe customers to produce high-quality content **faster** and **more** efficiently.

## GOAL

- ✓ **What** content is performing well and **Why**? — **Interpretable** & **Actionable** data-driven insights and recommendations
- ✓ **Can we create content** that performs well? — to enable multi-agentic systems to directly generate ***data-driven plans*** for ***creating, evaluating and iteratively refining engaging content***



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# Outline

**Main Research Challenges & Research Objectives**

Existing Explorations

Future steps

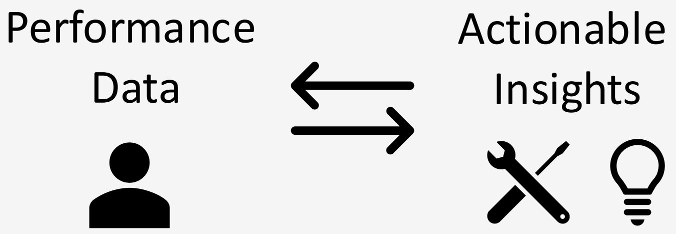
# Main Research Challenges

- ***What** content is performing well and **Why**?*

**Translating performance data** (e.g., user engagement) **into actionable insights and recommendations**

- ***Can we create content** that performs well?*

Lack of coordinated **data-driven reasoning and planning towards task decomposition to** directly create/generate high-performing content




✓ **What** content is performing well?

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# Main Research Challenges

- *What content is performing well and **Why**?*

**Translating performance data** (e.g., user engagement) **into actionable insights and recommendations**

- ***Can we create content** that performs well?*

Lack of coordinated **data-driven reasoning and planning towards task decomposition to** directly create/generate high-performing content

For creators → ***Evaluate & plan for data-driven content, based on interpretable <u>edit actions</u>***

For marketers → ***Evaluate & plan for data-driven content based on interpretable <u>insights</u>***

Performance Data ⇄ Actionable Insights

✓ **What content** is performing well?

✓ **Why** is it performing well?

✓ **Can we create content** that performs well?

# Research Objectives

**Challenge 1: Translating performance data** (e.g., user engagement) **into actionable insights and recommendations**

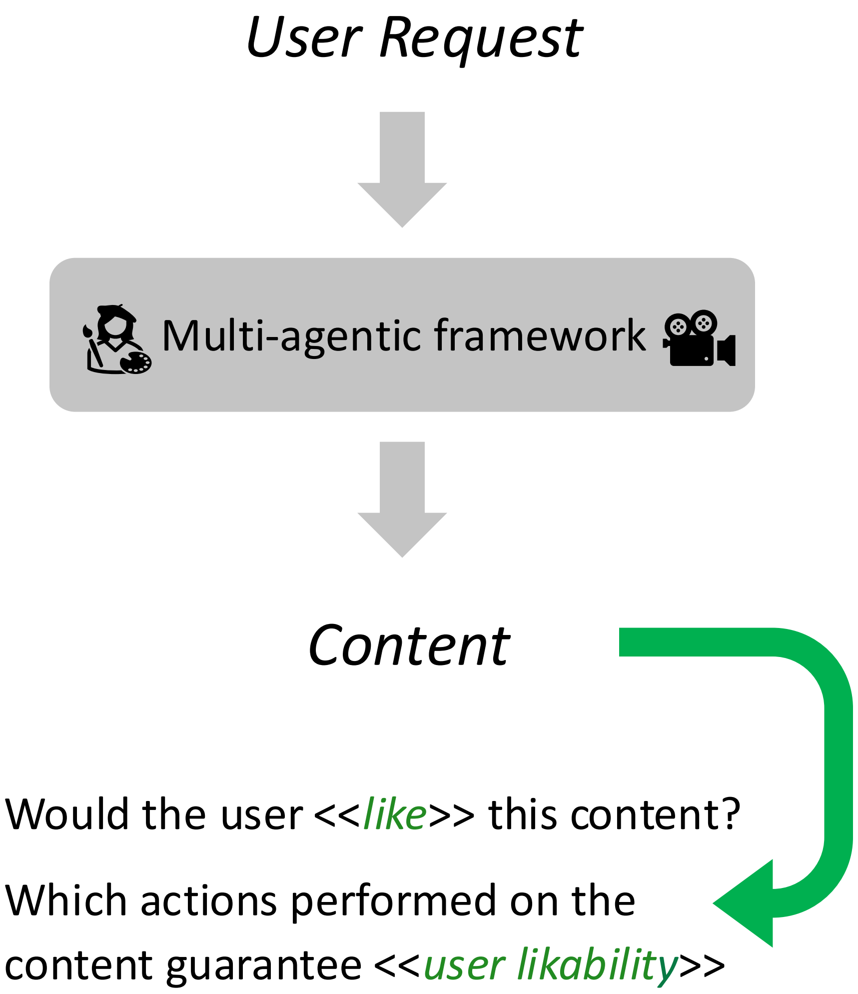
**Data-driven behavior understanding :** predicting engagement and insights from engagement

a. Data-driven behavior prediction (For ex: engagement prediction)

b. Explainable data-driven insights: Interpretable, actionable feature attribution

**Challenge 2: Data-driven reasoning and planning towards task decomposition to** directly create/generate high-performing content

**Data-driven Content modification* :** Modeling and controlling user(s) behavior to guide data-driven content generation and modification.



# Research Objectives

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**Challenge 2: Data-driven reasoning and planning towards task decomposition to** directly create/generate high-performing content

**Data-driven Content modification* :** Modeling and controlling user(s) behavior to directly guide data-driven content generation and modification.

*User Request*

Multi-agentic framework

*Content*

Directly modify the content that satisfy <<*user behavior*>>

* Partly explored

# Outline

Main Research Challenges &

Research Objectives

Existing Explorations

Future steps


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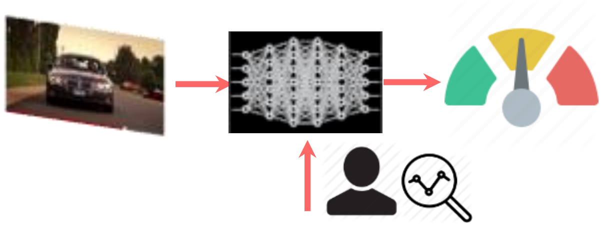
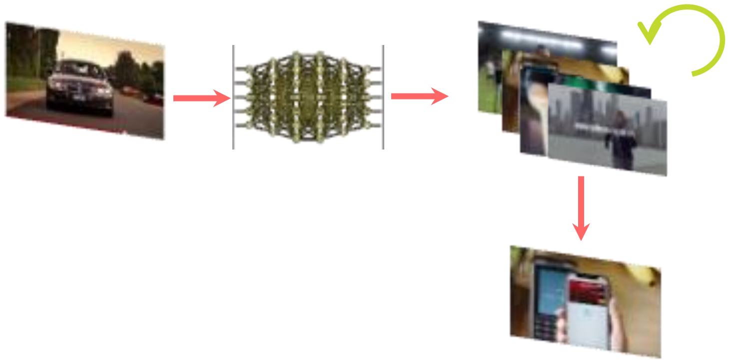
# Existing Explorations

## In-house models

Watchability: Performance Prediction



Closing the Loop: Auto Optimizing Content & Variants



## Differentiating factor

- Interpretable understanding of content performance
- Interpretability should be translatable to controlled actions users can take on Adobe tools to improve content

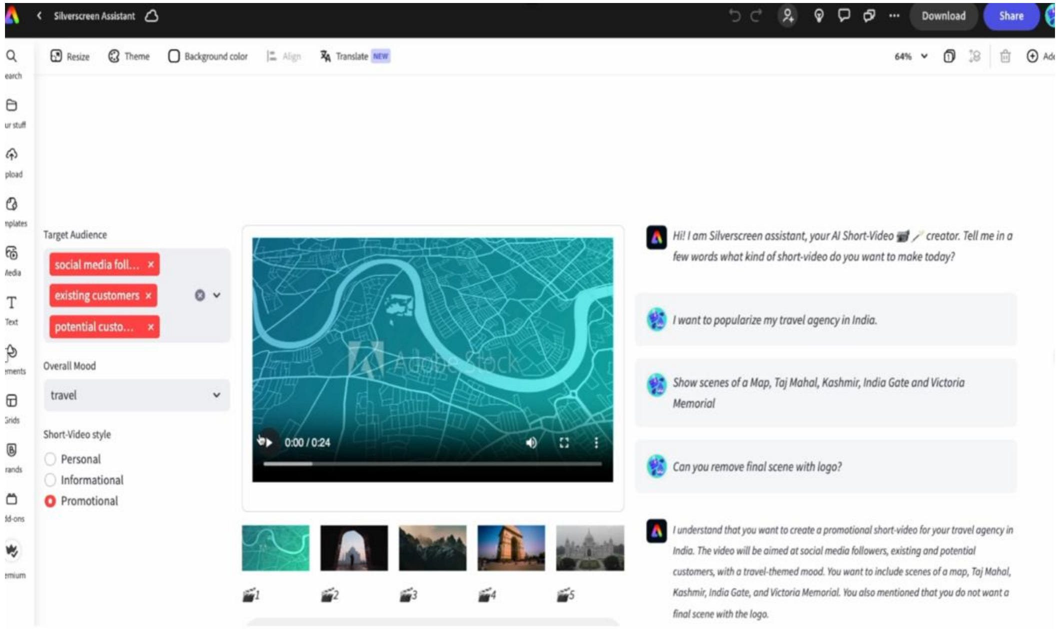
Newly available and collected performance data and SOTA MLLMs can map performance to interpretable and actionable suggestions on content

# Existing Explorations [yet to hide]

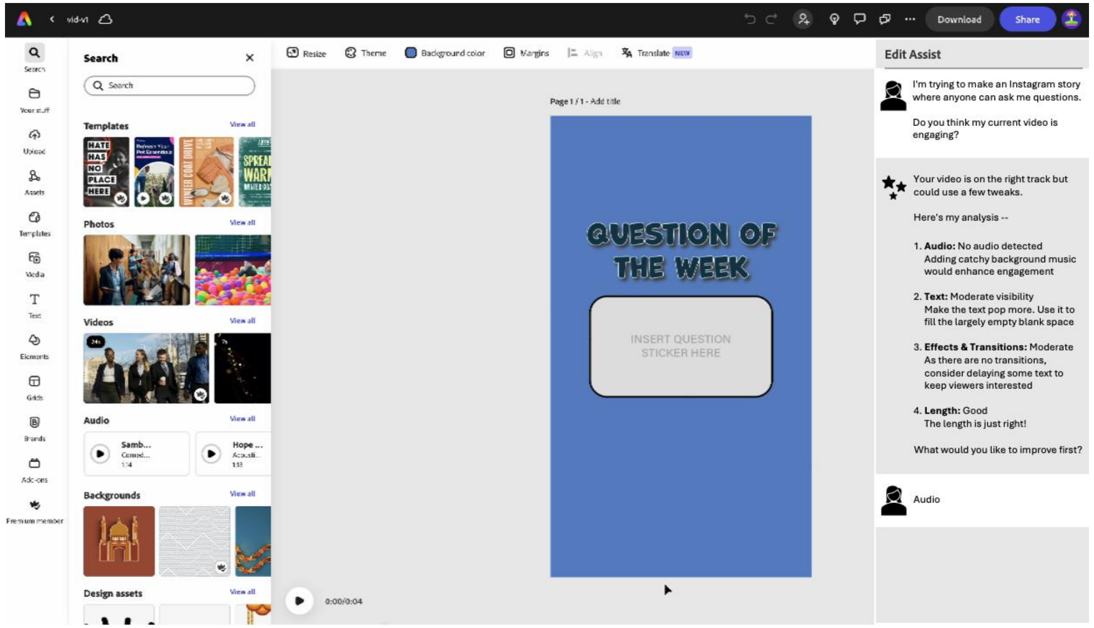
| | Creator | Marketer |
|---|---|---|
| Challenge 1: Translating performance data (e.g., user engagement) into actionable insights and recommendations | Yes<br><br>Project Silverscreen, EditAssist | Ongoing |
| Challenge 2: Data-driven reasoning and planning towards task decomposition to directly create/generate high-performing content | Yes<br><br>Project Loopedit | Future Work |

# 1. Data-driven Multi-agent frameworks for short-video creation

## ***Silverscreen***: Agentic short-video creation




## ***EditAssist***: Data driven short-video engagement understanding & improvement




For this presentation, ***content*** is generally **video** & ***content editing*** is generally **video editing**.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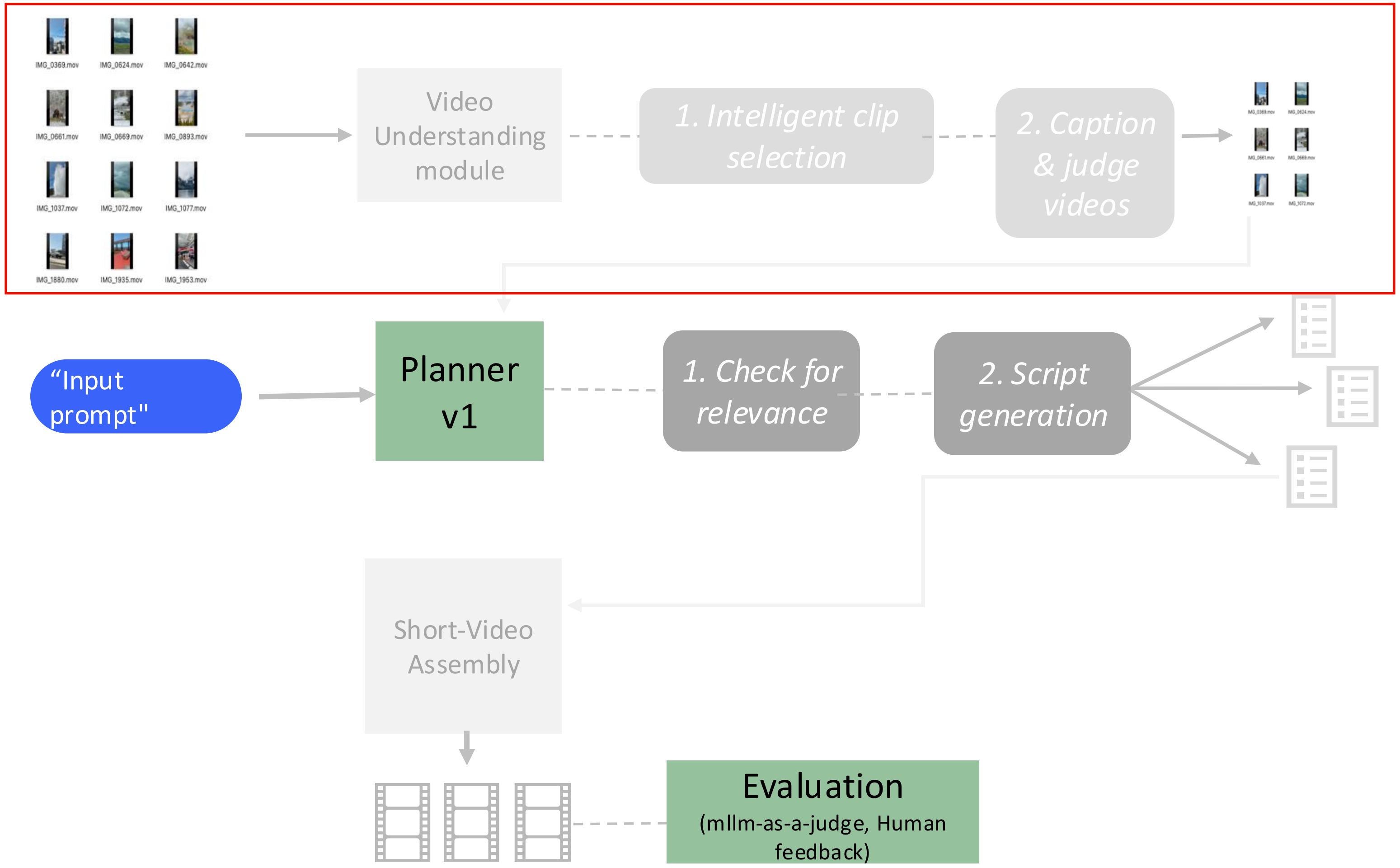
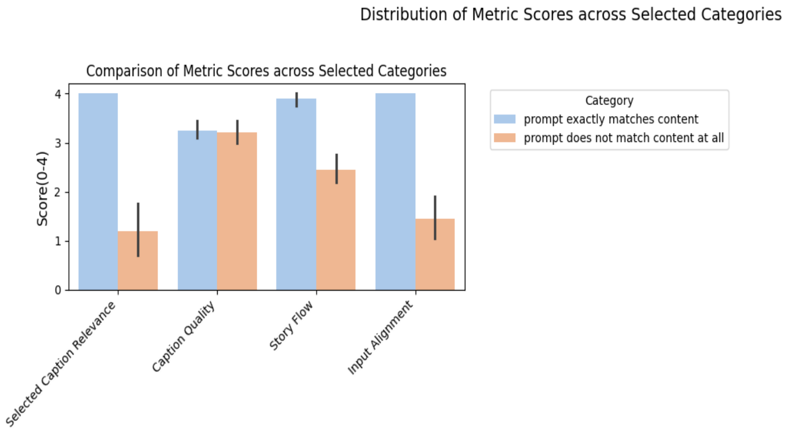
# A) Agentic short-video creation




## Quantitative Assessment




## Qualitative Assessment

*"wow the **outputs are so cool**! Wren and I just looked through the ones it gave me. This is awesome! **I can't wait to make a finished video off what it gave me**"*

# B) Data driven short-video engagement prediction & improvement

Creators

**Create**

Content
(short-videos)

How to optimize content?

As opposed to Platform-dependent metrics (*watch-time, likes, shares, etc.*), can content engagement be predicted based on content characteristics?

✓ Automated content refinement based on content's inherent characteristics

✓ Help creators with "actionable insights" to modify and improve content before publishing content

VidES Dataset
+
EditAssist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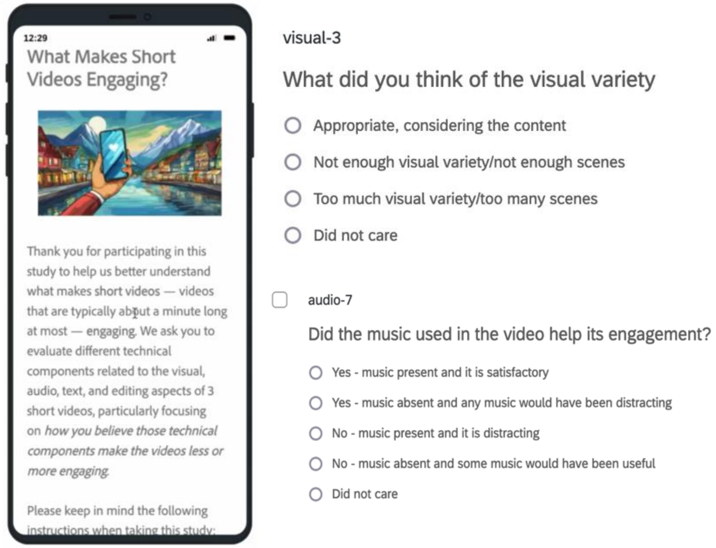
# VIDes Dataset (Rate video engagement and reason why)

What data?

- Edit signals

What can be learned ?

- Engagement based on edit signals used




650+ short-videos (< 1 min)

~2900 users with video editing skills

Overall engagement Score [1-5]

- Also asked about *individual edit signals*
  - 48 questions on each video about Text, Audio, Visuals, Storytelling, Scene transitions, etc.
  - Only asked about edit signals Actionable in Express
  - Scale further with 1000+ videos across different styles and categories of short-videos

# VIDes Dataset (Rate video engagement and reason why)

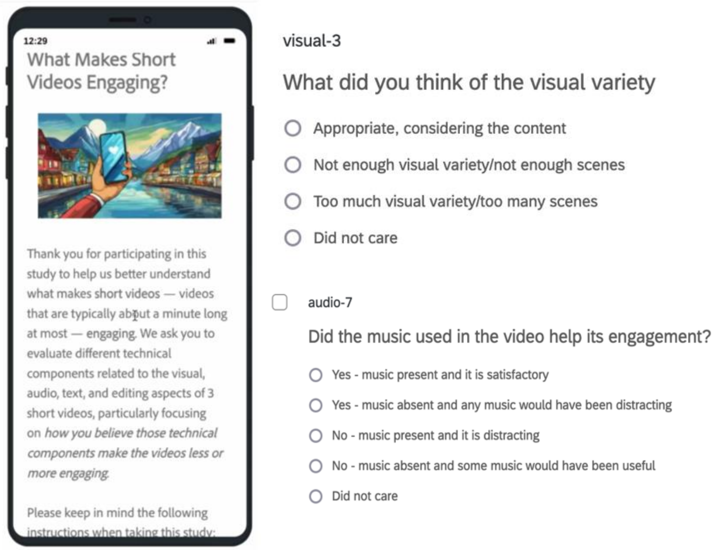
What data?

- Edit signals

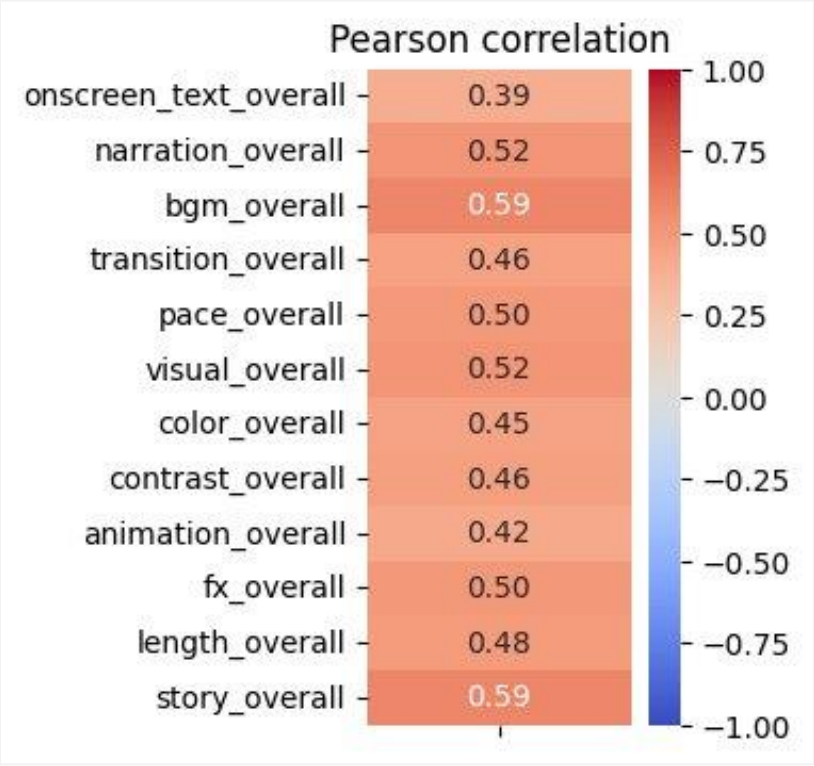
What can be learned ?

- **Engagement** based on edit signals used

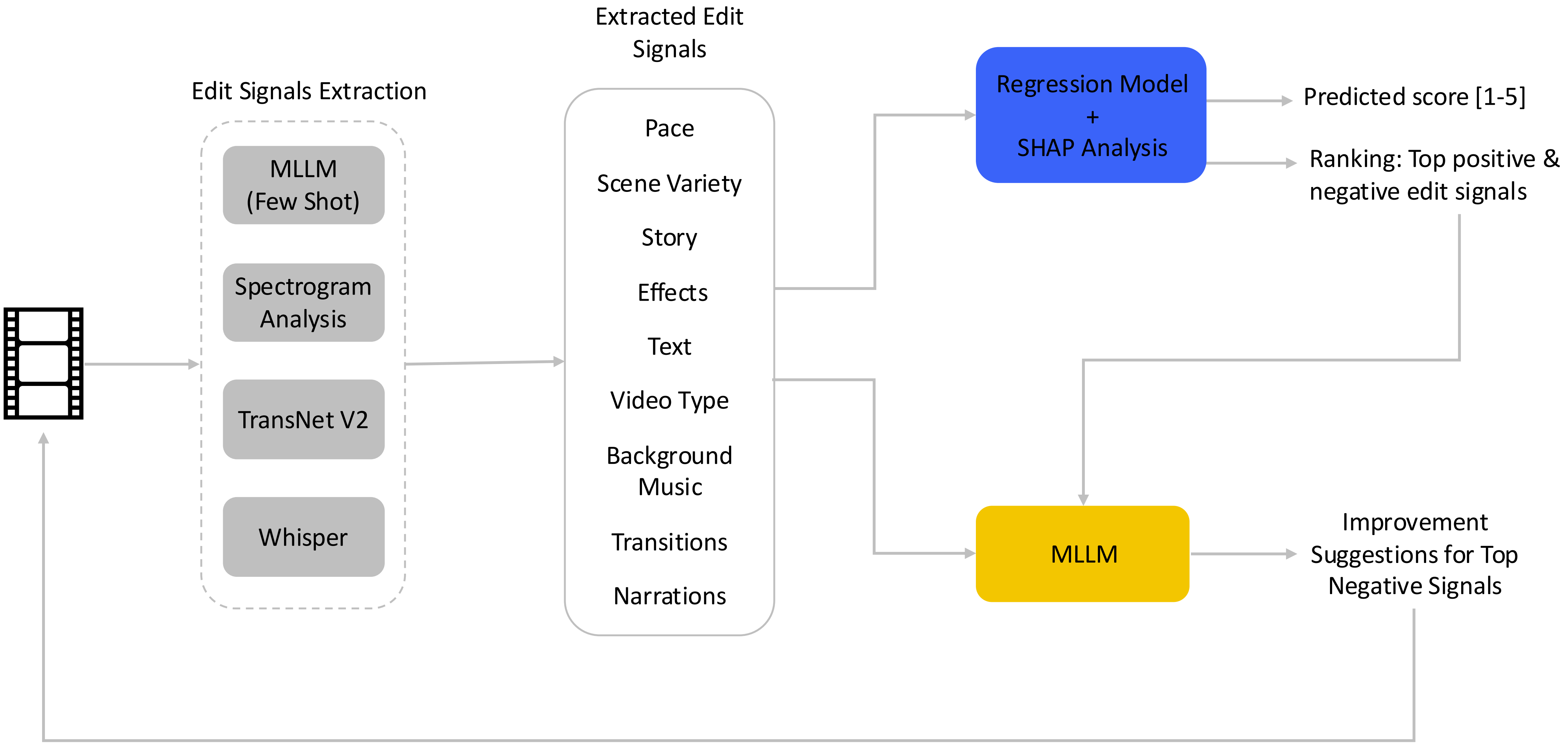
EditAssist




- Correlation analysis between ***edit signals*** & ***engagement***



# EditAssist framework



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# Quantitative Results

## Performance on Engagement Prediction & Improvement Feedback

| Method | ES Decomp. | Engagement Prediction | | | Improvement Feedback | |
|---|---|---|---|---|---|---|
| | | MAE | RMSE | Classification Accuracy | Accuracy | F1 |
| Random model | No | 1.45 | 1.77 | 0.21 | 0.27 | 0.43 |
| Q-Align [20] | No | 0.79 | 0.97 | 0.39 | N/A | N/A |
| GPT-4o (Zero-shot) | No | 1.19 | 1.39 | 0.13 | 0.36 | 0.54 |
| GPT-4o (Few-shot) | No | 1.02 | 1.23 | 0.28 | 0.41 | 0.57 |
| GPT-4o (Few-shot) | Yes | 0.75 | 0.88 | 0.38 | 0.45 | 0.61 |
| SmartEdit | Yes | **0.64** | **0.84** | **0.49** | **0.51** | **0.67** |

## Ablation Study

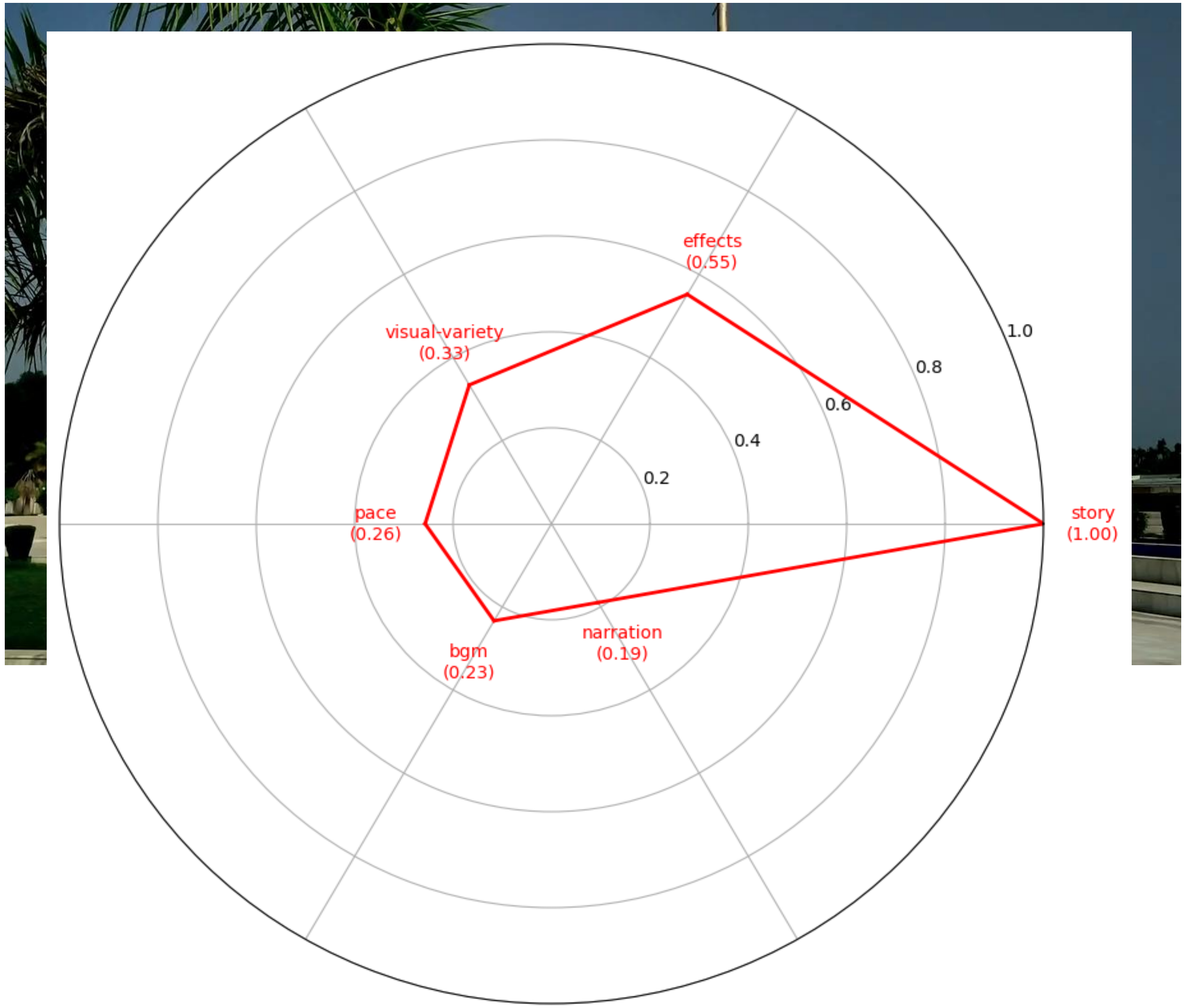
### Testing different backbones

| Regression Model | MAE | RMSE | clfAcc |
|---|---|---|---|
| XGBoost | 1.15 | 1.33 | 0.28 |
| Multi-Layer Perceptron (MLP) | 0.91 | 1.18 | 0.37 |
| Random Forest Regressor | **0.64** | **0.84** | **0.49** |

### Effect of example types on feedback improvement

| Good Examples | Bad Examples | Reasoning | Accuracy | F1 |
|---|---|---|---|---|
| 0 | 4 | No | 0.44 | 0.59 |
| 0 | 4 | Yes | 0.47 | 0.63 |
| 2 | 2 | No | 0.45 | 0.62 |
| 2 | 2 | Yes | 0.51 | 0.67 |

# Results: Qualitative (Poorly edited video)




| Top signals affecting engagement (+/-) | Human | Our model |
| --- | --- | --- |
| Story flow | ✓ | ✓ |
| Effects | ✓ | ✓ |
| Variety of scenes | ✓ | ✓ |
| Pace | ✓ | ✓ |
| Music | ✓ | ✓ |
| Narration | ✓ | ✓ |

**Ground Truth**

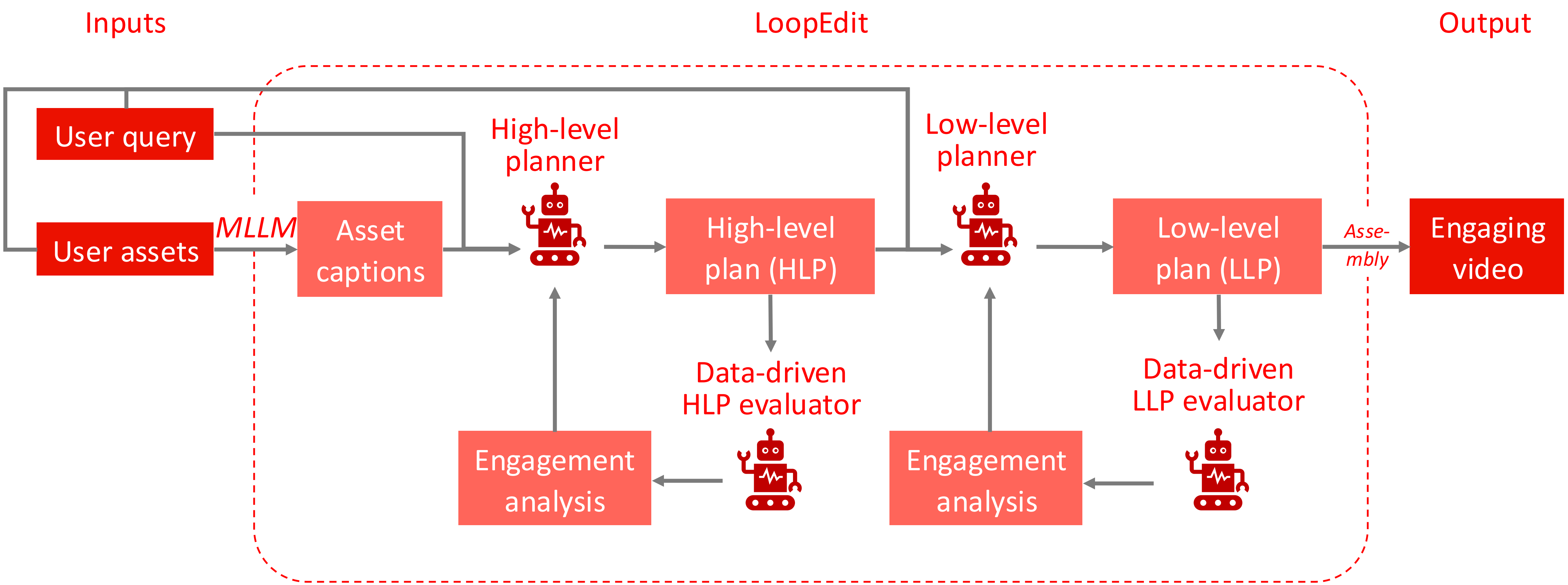
0.4

**Predicted**

1.1

*Engagement score scale:*
*0 = not at all engaging*
*1 = slightly engaging, needs many improvements*
*2 = somewhat engaging, needs a few improvements*
*3 = engaging, but can be improved*
*4 = very engaging, no improvements needed*

# C) Bringing it all together: Loopedit (Data-driven planner)




Demo: demo_max25.mp4

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# What does a plan look like?

Hierarchical

- **HLP**
  - Overview
  - Scenes
- **LLP**
  - Clips

**Overview**

**Pace:** Normal
**Mood:** Calm
**Category:** How-to

**Narration:** None
**Bgm:** Soft jazz
**Duration:** 15 sec

| Scene 1 | Scene 2 | Scene 3 | Scene 4 |
|---|---|---|---|

**Scene 2**

**Summary:** Demonstrate pouring grounds & preparing base
**Purpose:** Build anticipation
**Approx duration:** 3 sec
**Keywords:** dripper, hot water

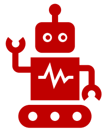
| Clip 1 | Clip 2 | Clip 3 | Clip 4 | Clip 5 | Clip 6 | Clip 7 | Clip 8 |
|---|---|---|---|---|---|---|---|

**Clip 4**

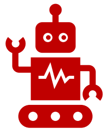
**Source:** CB_916.mp4
**Duration:** 2.3 sec
**Text overlay:** Step 1. Grind your beans
**Effect:** Zoom in

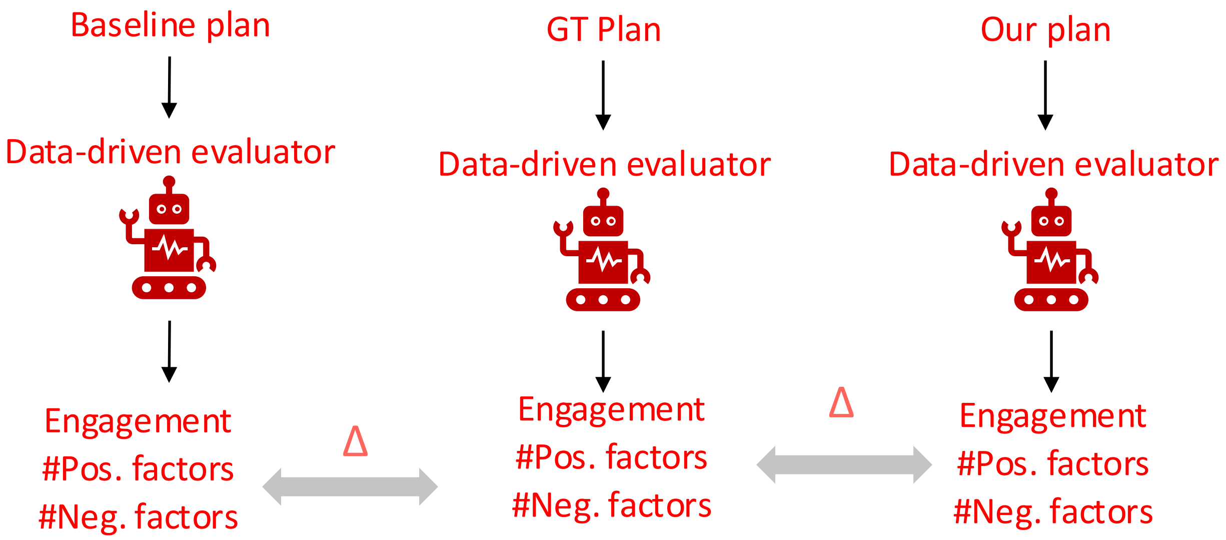
# Quantitative results: Planning & Evaluator agents

Data-driven
HLP evaluator



Data-driven
LLP evaluator





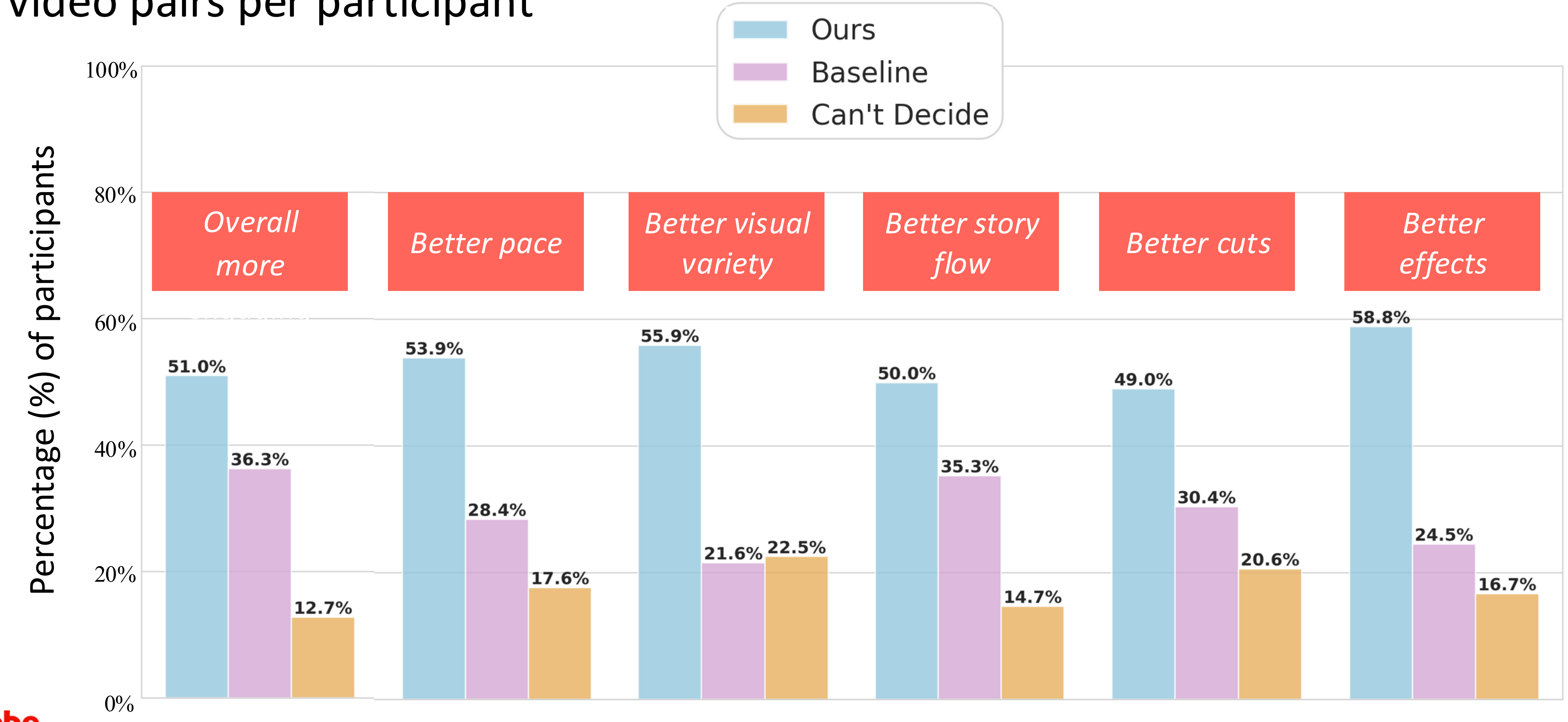

| Evaluator model | Pearson Correlation ↑ | Mean Absolute Error (MAE) ↓ |
|---|---|---|
| HLP evaluator | 0.776 | 0.65 |
| LLP evaluator | 0.759 | 0.90 |

| Plan | Method | Avg. delta (Δ) in engagement score ↑ | Avg. delta (Δ) in #positive factors ↑ | Avg. delta (Δ) in #negative factors ↓ |
|---|---|---|---|---|
| HLP | Baseline | 0.357 | 1.450 | -0.800 |
| | Ours | **1.143** | **1.895** | **-1.222** |
| LLP | Baseline | 0.375 | 0.563 | -0.500 |
| | Ours | **0.750** | **0.950** | **-0.882** |

# Quantitative results: User study

Take the survey here~
[Survey link]

- 17 participants
- 6 video pairs per participant



# Data-Driven Insights for Marketers

***~1800 campaigns*** ***~40,000 videos***

Genstudio lets customers associate their content with performance via dashboards and insights, but can we make the insights more

- Contextual?
- Actionable?

**Opportunity:** Unifying *all metrics across a group of campaigns based on user query* and translating them into *consistent, contextual insights*, we can:

- ➢ Reveal ***which ads drives ROI*** across channels and ***why***.
- ➢ ***Which ads are slow drivers*** or negative drivers that should be recalibrated
- ➢ ***What*** creative ***variants*** could drive or improve ROI

**Goal**: Enable faster budget and creative decisions by enabling analysis guided by ***explainable insights.***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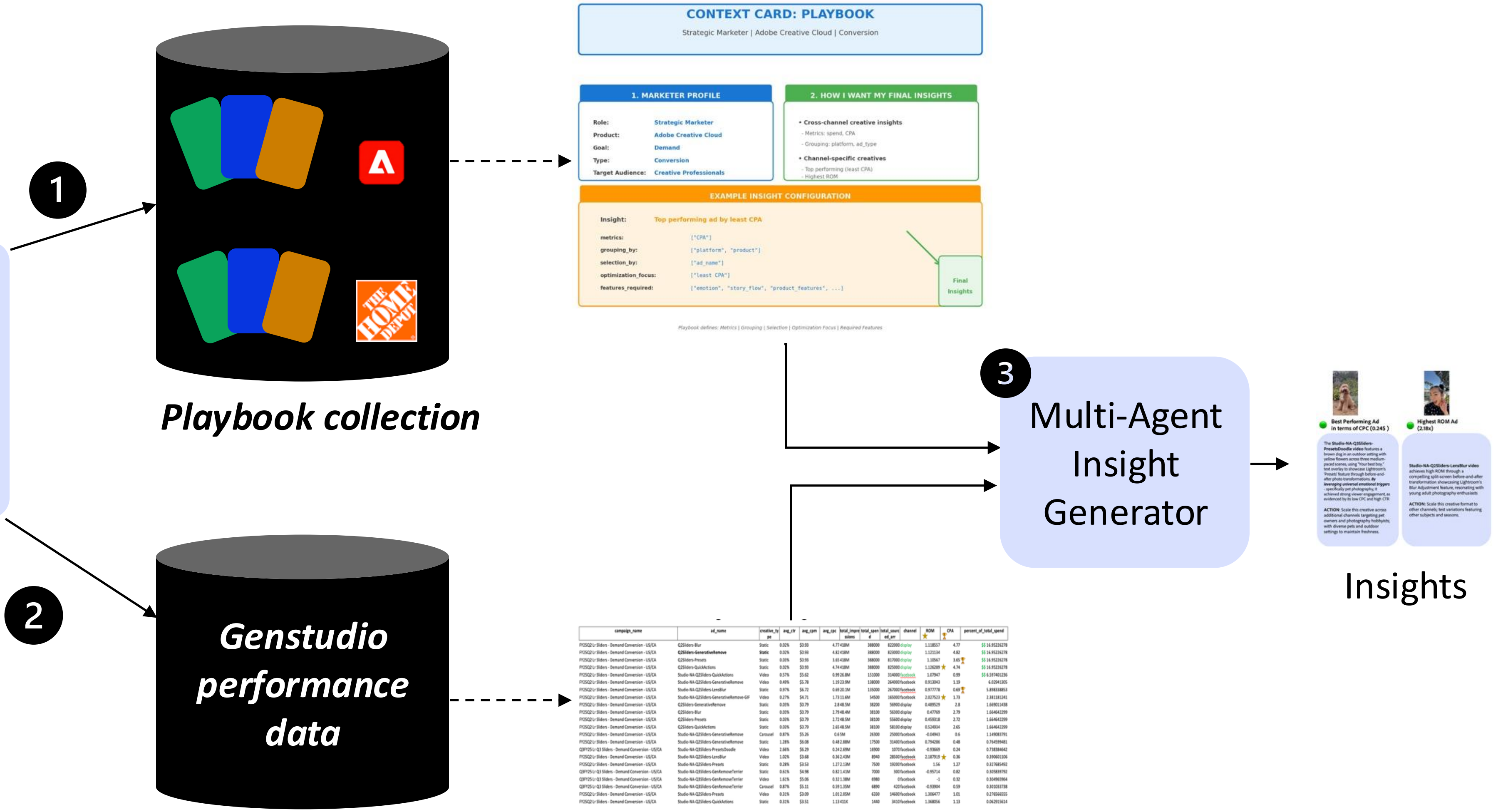
# Workflow

**INPUT CARD**
**Role:** Strategic Marketer
**Product(s):** Adobe Lightroom
**DDOM:** Acquisition
**Campaign Type:** Conversion
**Date range:** Mar 1, 2025 to Aug 1, 2025





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**Role:** Strategic Marketer
**Product(s):** Adobe Lightroom
**DDOM:** Acquisition
**Campaign Type:** Conversion
**Date range:** Mar 1, 2025 **to** Aug 1, 2025.

*Who are you & what kind of campaigns do you want to analyze?*

# Dataset extracted to generate Insights on

| campaign_name | ad_name | creative_type | avg_ctr | avg_cpm | avg_cpc | total_impressions | total_spend | total_sourced_arr | channel | ROM | CPA | percent_of_total_spend |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Q2Sliders-Blur | Static | 0.02% | $0.93 | 4.77 | 418M | 388000 | 822000 | display | 1.118557 | 4.77 | $$ 16.95226278 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | **Q2Sliders-GenerativeRemove** | **Static** | 0.02% | $0.93 | 4.82 | 418M | 388000 | 823000 | display | 1.121134 | 4.82 | $$ 16.95226278 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Q2Sliders-Presets | Static | 0.03% | $0.93 | 3.65 | 418M | 388000 | 817000 | display | 1.10567 | 3.65 | $$ 16.95226278 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Q2Sliders-QuickActions | Static | 0.02% | $0.93 | 4.74 | 418M | 388000 | 825000 | display | 1.126289 | 4.74 | $$ 16.95226278 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-QuickActions | Video | 0.57% | $5.62 | 0.99 | 26.8M | 151000 | 314000 | facebook | 1.07947 | 0.99 | $$ 6.597401236 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-GenerativeRemove | Video | 0.49% | $5.78 | 1.19 | 23.9M | 138000 | 264000 | facebook | 0.913043 | 1.19 | 6.02941305 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-LensBlur | Static | 0.97% | $6.72 | 0.69 | 20.1M | 135000 | 267000 | facebook | 0.977778 | 0.69 | 5.898338853 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-GenerativeRemove-GIF | Video | 0.27% | $4.71 | 1.73 | 11.6M | 54500 | 165000 | facebook | 2.027523 | 1.73 | 2.381181241 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Q2Sliders-GenerativeRemove | Static | 0.03% | $0.79 | 2.8 | 48.5M | 38200 | 56900 | display | 0.489529 | 2.8 | 1.669011438 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Q2Sliders-Blur | Static | 0.03% | $0.79 | 2.79 | 48.4M | 38100 | 56300 | display | 0.47769 | 2.79 | 1.664642299 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Q2Sliders-Presets | Static | 0.03% | $0.79 | 2.72 | 48.5M | 38100 | 55600 | display | 0.459318 | 2.72 | 1.664642299 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Q2Sliders-QuickActions | Static | 0.03% | $0.79 | 2.65 | 48.5M | 38100 | 58100 | display | 0.524934 | 2.65 | 1.664642299 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-GenerativeRemove | Carousel | 0.87% | $5.26 | 0.6 | 5M | 26300 | 25000 | facebook | -0.04943 | 0.6 | 1.149083791 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-GenerativeRemove | Static | 1.28% | $6.08 | 0.48 | 2.88M | 17500 | 31400 | facebook | 0.794286 | 0.48 | 0.764599481 |
| Q3FY25 Lr Q3 Sliders - Demand Conversion - US/CA | Studio-NA-Q3Sliders-PresetsDoodle | Video | 2.66% | $6.29 | 0.24 | 2.69M | 16900 | 1070 | facebook | -0.93669 | 0.24 | 0.738384642 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-LensBlur | Video | 1.02% | $3.68 | 0.36 | 2.43M | 8940 | 28500 | facebook | 2.187919 | 0.36 | 0.390601106 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-Presets | Static | 0.28% | $3.53 | 1.27 | 2.13M | 7500 | 19200 | facebook | 1.56 | 1.27 | 0.327685492 |
| Q3FY25 Lr Q3 Sliders - Demand Conversion - US/CA | Studio-NA-Q3Sliders-GenRemoveTerrier | Static | 0.61% | $4.98 | 0.82 | 1.41M | 7000 | 300 | facebook | -0.95714 | 0.82 | 0.305839792 |
| Q3FY25 Lr Q3 Sliders - Demand Conversion - US/CA | Studio-NA-Q3Sliders-GenRemoveTerrier | Video | 1.61% | $5.06 | 0.32 | 1.38M | 6980 | 0 | facebook | -1 | 0.32 | 0.304965964 |
| Q3FY25 Lr Q3 Sliders - Demand Conversion - US/CA | Studio-NA-Q3Sliders-GenRemoveTerrier | Carousel | 0.87% | $5.11 | 0.59 | 1.35M | 6890 | 420 | facebook | -0.93904 | 0.59 | 0.301033738 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-Presets | Video | 0.31% | $3.09 | 1.01 | 2.05M | 6330 | 14600 | facebook | 1.306477 | 1.01 | 0.276566555 |
| FY25Q2 Lr Sliders - Demand Conversion - US/CA | Studio-NA-Q2Sliders-QuickActions | Static | 0.31% | $3.51 | 1.13 | 411K | 1440 | 3410 | facebook | 1.368056 | 1.13 | 0.062915614 |

** Note: CPA values are imagined for analysis purposes. ROM = (ARR - Spend) ÷ Spend*


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# ACTION: STRATEGIC RECOMMENDATIONS

## 🚫 Poor Performers: Pause or Investigate

1. **GenRemoveTerrier — Pause:** This **video** ad on **Facebook** is reporting negative returns (-1.0 ROM) with narrow use case (pet background removal)
**Action:** Pause immediately and reallocate budget to LensBlur. Investigate narrow audience targeting.

2. **Presets — Investigate:** This **static** ad on **display** with highest budget Spend ($388K) reports low ROM (0.459) despite significant spend
**Action:** Conduct conversion funnel audit and A/B test broader editing messaging.
Reduce spend, reallocate to LensBlur while optimizing targeting.


## 🚀 Untapped Potential: Boost

1. **LensBlur — Scale :** This **static** ad on **Facebook** reported highest ROM (2.18) with 8.9k$ budget spend which is 0.39% of the total budget as opposed to highest budget spent on an ad being 16%
**Action:** Increase budget slightly to test efficiency ceiling. Scale across additional platforms and enhance CTA to drive conversions.

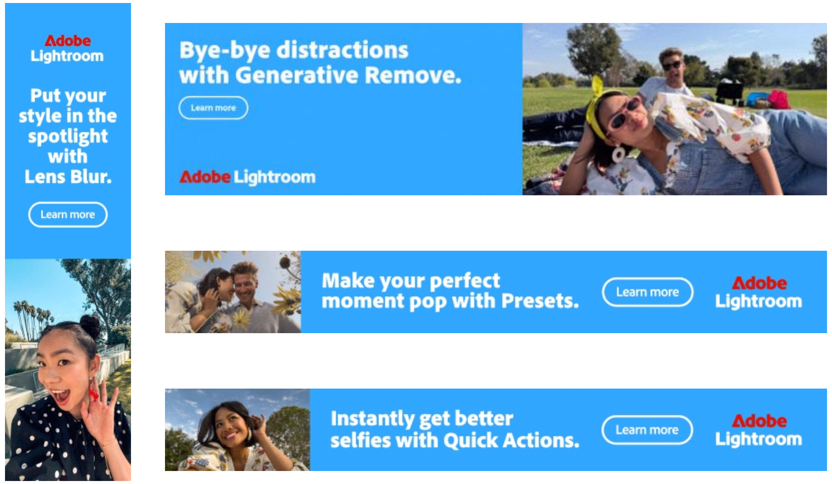
## ✅ Good Performers: Maintain & Optimize


1. **QuickActions — Maintain & Optimize:** Good ROM (1.079 and 1.12) on both static **display** and **facebook** video creatives -- trusted brand appeal for selfie enhancement
**Action:** Maintain spend and optimize targeting to improve CPA. Refine CTA and test creative variations for incremental improvements.
2. **LensBlur — Maintain & Optimize:** This **static** ad on **Facebook** reported good ROM (1.12), low CPA with high investment (135k) - Keep the ad active while introducing minor creative updates to keep it fresh.

# A. CROSS-CHANNEL CREATIVE OVERVIEW

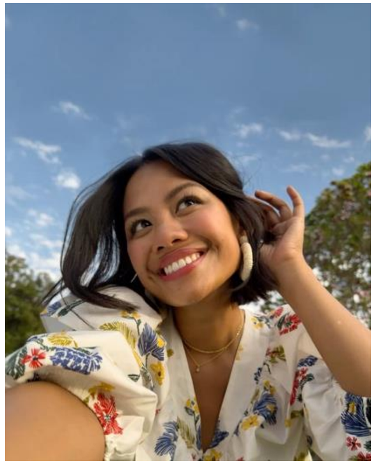
## 1. Highest Spend by Channel

### Display




- On the Display platform, the "**FY25Q2 Lr Sliders - Demand Conversion - US/CA**" campaign allocated an equal budget of **$388,000** across four ads: **Q2Sliders-Blur, Q2Sliders-GenerativeRemove, Q2Sliders-Presets,** and **Q2Sliders-QuickActions,** each commanding **16.95%** of overall spend.

### Facebook



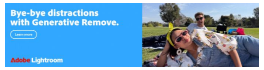
- **Studio-NA-Q2Sliders-QuickActions**: This ad commanded highest total spend of **$151,000** on Facebook, representing **6.6%** of the total spend.
- The video showcases a person outdoors in a floral dress with text overlay "Your beautiful smile," highlighting different Quick Actions UI to enhance subject, sky with a more vibrant after transformation shown.

# A. CROSS-CHANNEL CREATIVE OVERVIEW

## 2. Highest CPA by creative type

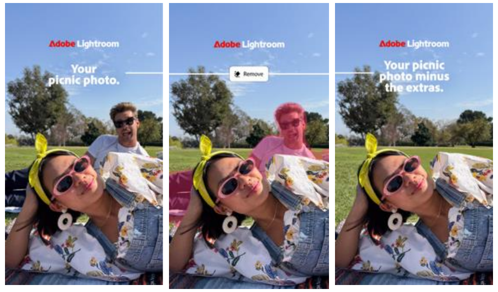
**Static**

Q2Sliders-GenerativeRemove
**Channel**: Display
**CPA**: 4.82$




**Carousel**

Studio-NA-Q2Sliders-GenerativeRemove
**Channel**: Facebook **CPA:** 0.6$




**Video**

**CPA:** 1.19$

- On **Display** & **Facebook** channels, the ad *commanded the highest CPA* in **static** and **video** formats, featuring a sequence of images depicting Adobe Lightroom's Generative Remove tool used to remove background person.
- The high CPA indicates inefficiencies, *possibly due to* **targeting or messaging misalignment.**

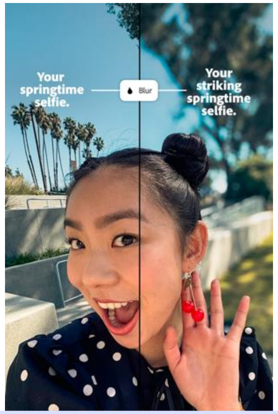
**ACTION**: **Re-evaluate audience targeting** to ensure the ads are reaching potential high-intent users who value professional-quality edits. Conduct testing with different **variations to identify what resonates best** with the target audience and reduces CPA.

## 3. Top spending + most efficient CPA creatives

**Display**

Q2Sliders-Presets **Spend:** 388k **CPA**: 3.65$


**Facebook**




Studio-NA-Q2Sliders-LensBlur
**Spend:** 135k **CPA**: 0.69$

- On **display** channels, the ad with highest budget allocation **$388,000 and efficient CPC (3.65$ CPC)** showcases Adobe Lightroom's Presets featuring a couple surrounded by flowers . Meanwhile**, on Facebook**, the top spending efficient ad (**$135,000 ,0.69$ CPC)** utilizes a split-screen to demonstrate Lightroom's Blur editing feature, effectively showcasing a before-and-after transformation of a young girl wearing polka dots.
- The relatively lower CPC of the **LensBlur** ad on Facebook suggests it might be capturing a more cost-effective audience.

**ACTION**: **Bolster** the Facebook campaign, **leveraging its lower CPC for broader reach**. **Investigate potential overspending** or underperformance in display channels, ensuring campaign is meeting conversion goals.

# B. CHANNEL-SPECIFIC CREATIVE INSIGHTS

Display

## Q2Sliders-QuickActions


**Best Performing Ad in terms of CPC (2.65$ )**

**Highest ROM Ad (1.13x)**

**Highest budget share with ROM (16.95% of total spend, 1.12x ROM)**

- This **Q2Sliders-QuickActions** gif ad features a young woman outdoors taking a selfie, featuring multiple Quick Actions Lightroom leading to better selfies with a clear CTA "Learn more" button.
- By addressing the common need for enhanced selfies, the ad leverages Adobe Lightroom's Quick Actions feature as a straightforward solution for photo editing enthusiasts seeking immediate results achieving a satisfactory ROM of 1.13*

**ACTION**: To maintain and expand the success of this ad, test scaling and creating variations that highlight other Quick Actions features and settings, such as indoor photography or group photos, to broaden appeal. Consider implementing A/B testing to refine messaging and visual elements, with an expected impact of increased CTR and ROM.

## Q2Sliders-Presets


**Underperforming Ad in terms of ROM (0.46x)**

- This ad features **Adobe Lightroom's Presets** with couples appearing in a vibrant before/after gif transition surrounded by sky and flowers. The ad employs a professional color scheme with balanced, diverse hues to maintain a polished aesthetic, appealing to aspiring photographers.

**ACTION**: To address the underperformance in ROM, Consider testing with different versions and landing pages specifically tailored to niche audience groups

*** Showing shortened creative summary & reasoning**

# B. CHANNEL-SPECIFIC CREATIVE INSIGHTS

Facebook

### Best Performing Ad in terms of CPC (0.24$ )

The **Studio-NA-Q3Sliders-PresetsDoodle video** features a brown dog in an outdoor setting with yellow flowers across three medium-paced scenes, using "Your best boy." text overlay to showcase Lightroom's 'Presets' feature through before-and-after photo transformations. ***By leveraging universal emotional triggers*** - specifically pet photography, it achieved strong viewer engagement, as evidenced by its low CPC and high CTR

**ACTION**: Scale this creative across additional channels targeting pet owners and photography hobbyists; with diverse pets and outdoor settings to maintain freshness.

### Highest ROM Ad (2.18x)

**Studio-NA-Q2Sliders-LensBlur video** achieves high ROM through a compelling split-screen before-and-after transformation showcasing Lightroom's Blur Adjustment feature, resonating with young adult photography enthusiasts

**ACTION:** Scale this creative format to other channels; test variations featuring other subjects and seasons.

### Highest budget share with ROM (6.59% of total spend, 1.079x ROM)

**Studio-NA-Q2Sliders-QuickActions**
Effectively showcases multiple "Quick Actions" with slow pacing ensuring clarity. It opens with a pleasant scene with young woman in floral dress against blue skies, featuring text overlay and strategically placed UI elements ("Quick Actions," "Auto" buttons) demonstrating quick photo edits

**ACTION**: Scale campaign to similar demographics in additional regions/platforms; increase spend allocation given positive ROM to maximize acquisition.

### Underperforming Ad in terms of ROM (-0.96x)

**Studio-NA-Q3Sliders-GenRemoveTerrier** ad underperformed (ROM: -1.0)
despite emotionally engaging dog content due to slow pacing, limited visual variety, and limited call-to-action ("try now/get started").

**Action**: Pause ad and analyze conversion path; re-evaluate messaging alignment with stronger, direct call-to-action.

# Next

**Data-driven content modification**

Based on past data and insights, modify existing content to create variants ***that will perform better***

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# Outline

Main Research Challenges

Research Objectives

Existing Explorations

Future steps

# Next Steps

## Potential Customers

- Genstudio – Wayne Hoang, Corinne Littleton, Rebeka Huang
- Genstudio – Raj Sarkar

**Data-driven insights**
- 3-6 months
- Includes advance feature attribution (ex:- determining causal relationships)

**Data-driven content modification**
- 6-9 months
- Includes learning from feedback
- Includes evaluation

**Data-driven generalization**
- 9-12 months
- Test across multiple segments

Adobe

# Parallel collaborations

- Evaluation of short-videos
  - Uttaran, Digbalay, Ananya Sai – Evaluation metrics to evaluate quality of intermediate and final assets
    Learnings from: Project Silverscreen, Doc2Video, Slides2Video

- Short-video efficient tool-calling
  - Mira, Valentina, Bryan, Fabian – Project [X]
    Learnings from: Project Roughcut, Project Storybuilder


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