Frames

Transforming long-form articles into visually engaging short-form content

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Senior Design Project: Frames
Redefining News Consumption for Gen Z

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Executive Summary

Product and Value Proposition

Frames is a platform where publishers can transform their long-form articles into concise, visually engaging short-form content (see Appendix for examples). Each frame will encapsulate a key idea or fact from the article and pair it with a relevant visual, all presented in a format optimized for quick consumption on social media.

Market, Customer Segment, and Growth

Our market opportunity comes from the increasing percentage of Americans who consume news through social media (>60%) and the growing ad spend in the social media space (52% since 2020). News and media outlets spend >$1B on their social media presence per year, and AI content generation B2B SaaS has seen significant venture investment since 2020.

Competition

Our main competitors are Canva and Adobe, graphic design softwares that media teams currently use for post creation. However, these tools require more manual work and expertise.

Costs

Our costs are low, with web hosting and post creation. Image generation drives most of our costs, which remain below $0.05 per post generated in the worst case.

Revenue and Pricing

Our revenue model is subscription based, priced at $9/month and $50/month for our entry level vs. premium product offering.

Product Development Update
Given a headline and article text, the Frames engine can now generate Instagram stories, Facebook posts, Instagram posts, and Twitter posts, powered by GPT4 and DALLE image generation. We also have a proof of concept for generating short TikTok style summary videos with these Frames. We allow users to input links to articles, generate content, and then post that content to their connected social accounts. Image generation now bypasses sensitive content blockers on DALL-E by grouping censored topics into more broad, allowed image generation topics. Additional features have also been implemented such as login authentication and post history, which enable users to revisit and edit past generated content projects. Overall, these updates significantly expand the creation and posting capabilities across major social platforms to provide an all-in-one efficient automated content generation and publishing solution.

See Appendix 7 and 8 for example content and sensitive content blocker bypass.

See Demo for post generated from a link to an article here

See Demo for post generated from inserted text and title here

Value Proposition
The value proposition of Frames is three-fold:
1. The first is reducing time and costs traditionally required for manual content creation including media team headcounts and software costs.
2. The second is customization and adaptability according to brand identity, messaging preferences, and social media platforms. This customization ensures a seamless integration, making it adaptable to diverse topics, editorial styles, and publishing contexts.
3. The third is the end-to-end nature of the Frames platform. In its final form, Frames will incorporate the entire social media workflow, from ideation to approvals to scheduling posts, serving as the hub for all social media activity for these publishers.

Stakeholders
Our stakeholders are news companies with a digital presence, people who consume and find news through social media platforms, and our web hosting and tech stack tools such as AWS, Google Vision, and OpenAI.
1. News and Media Companies: These are our direct customers and the end users of our product. This includes organizations across print, digital, television, radio that produce written content. Their key needs are improved efficiency, consistency, and management around social media publishing.
2. Reporters and Content Teams: While executives may purchase Frames, reporters and employees authoring articles are key secondary users interacting with our tools on a day-to-day basis.
3. Technology Partners: Our success relies on effectively leveraging leading AI/ML technologies including GPT-4, DALL-E 2, and Google Vision API, as well as cloud services from AWS.

4. End Readers and Social Media Users: While not directly our customers, we aim to create content optimized for the continuously evolving preferences of end users across demographics and social media platforms.

Market Opportunity & Customer Segments

The market segment for technological interventions that improve news media publishing's reach is experiencing a robust expansion, presenting a significant market opportunity with extensive growth potential. In the past several years, we have seen traditionally print-based media shift toward increasingly utilizing digital platforms – both as a means for content distribution, as well as to build brand awareness. This transformation has created a need for integrating technology into social media content to more effectively target what is growing to be news companies' largest audience. Our customer segments can be broken down into four main categories, ranging in size and focus:
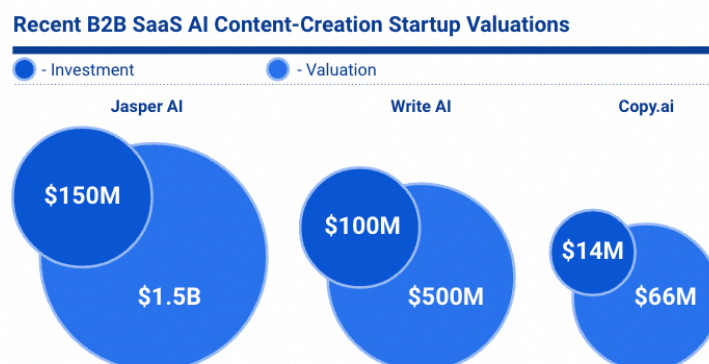
	DP	PHILLY VOICE	The Philadelphia Inquirer	WALL STREET JOURNAL
Type of News	University News	Local	Local/National	National/Intl.
Market Value	Nonprofit	<$5M	$300M	$450M
Media Team Size	1	Journalists themselves	>5	Dedicated team per geography, >20
Software Used	Canva/Adobe	Canva/Adobe	Canva/Adobe	Canva/Adobe

Market Segment Size and Growth

In assessing the market opportunity for Frames, we considered the substantial anticipated growth of technology-driven advertising content. Through user interviews, we were able to gauge publishers' need for tailored promotional content that effectively engages consumers while seamlessly integrating with their existing operations. A recent report by the Pew Research Center indicated that 75% of the highest traffic news outlets have an official presence on Facebook, X (99%), Instagram (97%), YouTube (93%), Snapchat (25%), and TikTok (89%) – which is up from 57% in 2021. We also found through user interviews that link click rate is a key metric in tracking social media impression to article read effectiveness. News agencies are increasingly aiming to bolster this metric as they tailor their social media content more to a younger generation. It is clear that social media is an instrumental component of the shifting growth strategy for news outlets, and our product capitalizes on this shift by facilitating a seamless transition.

To further our analysis of growth trends in the AI startup industry, we can observe three emerging AI companies that have recently received significant venture backing. Jasper AI, a company that uses its proprietary technology to help companies create advertisement campaigns and content, was recently valued at $1.5B thanks to a $150M round of venture capital backing.

Write AI is a GPT-3 based writing startup that helps businesses create written content for all operations that recently raised $100M on the basis of a $500M valuation. The last is Copy.ai, another GPT-3 based company that raised $13.9M based on a $66M valuation. All three of these businesses center around AI-based content creation for businesses. These examples are indicative of widespread market readiness and a growing investment appetite for a company like Frames that specializes in content creation for publishers.

Recent B2B SaaS AI Content-Creation Startup Valuations

- Investment   - Valuation

| Jasper AI | Write AI | Copy.ai |

$150M $1.5B $100M $500M $14M $66M

We base our market size estimation off our defined customer segments and average annual spend by media and news outlets on social media teams. There are about 6000 active newspapers and outlets in the US, according to a recent Axios report. Of these 6000, Pew Research has found that there are 105 with a large online presence (10 million unique monthly visitors). We estimate that about 5900 news companies have small media teams dedicated to their online presence. The average social media team is 3 people (Planable), and average social media marketing/editing salary is between $47,500 and $76,500 (ZipRecruiter). Using the $62,000 average, we estimate the yearly spend on salaries alone from small newspapers for social media to be around $1.097B. For larger corporations, there is a lack of transparency with regards to the size of media teams. Based on user interviews, however, we conservatively estimate 20 people per media team. Given 105 major large news corporations, we include an additional $130.2M salary spend.

The final aspect of social media team spend is software. Canva Pro and Canva Teams are the industry norm, along with the Adobe Suite for media. Together, these cost $10 + $89 per month per user using corporate pricing, leading to an annual cost of $1,188. Using our previous social media team member numbers in total we have 19,800[1] people employed on social media teams for media companies, at a software cost per employee of $1,188, we have a total spend on editing software for social media of $23.52M[2]. This brings our estimated spend by news and media outlets on social media teams to **$1.25B per year in the US**.

Competition

Our main competitors in this space are Canva and Adobe, the leading graphic design platforms used by media teams. However, users must start their designs from scratch and manually write post summaries, find appropriate images, and format content into posts. This is a tedious, time-consuming process, especially when employees are required to do this design work outside of their core responsibilities.

Frames differ from these general design tools as an automation engine and management platform specifically for social media content creation. Our value proposition centers on instantly generating multiple pieces of formatted, visually rich content that are ready to post. Going

beyond just content generation, Frames incorporates the entire social media workflow from ideation to approvals to scheduling posts, eliminating the manual effort currently required of publishers' social teams.

Another competitor is Jasper AI, with a tool meant to help individuals write in their own tone for brand marketing. While the product has a similar function as our own, it is not direct competition as it is meant to assist with creating advertisement campaigns for brands and not day-to-day social media posts.

Costs
Web hosting costs for Saas products: ~$200-$800/month
Content costs:

Type of Post	Cost of Written Content Generation	Cost of Image Generation	Total Cost per Post
Post with user inputted image	$0.0007405[3]	$0	$0.0007405
Post with generated image	$0.0007405	$0.04[4]	$0.0407405

Revenue Model and Pricing
In order to establish our revenue model, we factor in our present costs as well as the current social media practices of news companies and the services they pay for.

Currently, media teams use Canva and the Adobe Suite, which cost $10 and $89 per month per user on group pricing. Though we cannot replace the various Adobe use cases and functionalities, Canva gives us a good starting point for pricing. Our costs increase when users want image generation features included in the product instead of uploading their own digital assets. To accommodate the range in usage, we establish two main pricing options: with and without image generation. Social media pages for newspapers post content for 10 to 20 articles a day on their pages. Thus, on the high end we incur $25.26[5] in costs per month for a plan with image generation and $0.459 in costs per month if they provide their own images.

Our pricing model follows that of a subscription service, as this is standard for software products comparable to ours and familiar to the client. We break it down into two different tiers[6] as follows:

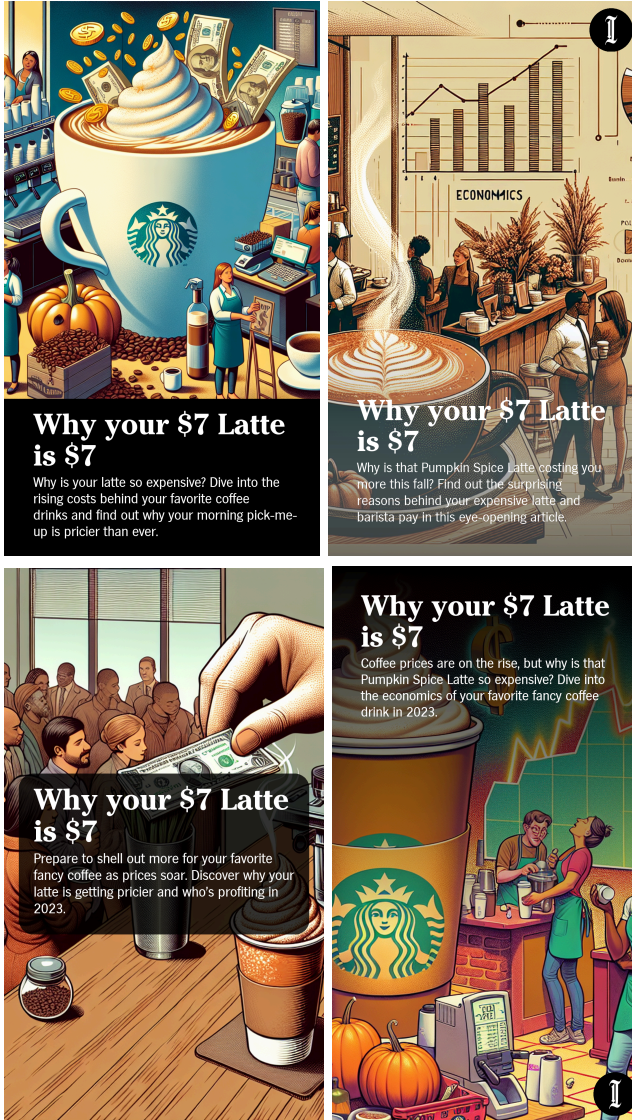| Pricing	Post Allowed Per Day	Includes Generated Images?	Our Cost per Month
Basic			
$9/user/month	20	No	$0.459
Premium			
$50/user/month	20	Yes	$25.26

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Appendix

1. (3*5900+20*105) = 19,800
2. 19,800*$1,188 = $23.52M
3. Chat GPT Calls Costing :
    a. $0.0005/1k tokens inputted and $0.0015/1k tokens outputted
    b. average of 0.75 words/token, and news articles average 600-1500 words, for costing we will take the average of 600 and 1500, 1050
    c. 1050 words inputted is 1400 tokens and about 20 words outputted is 27 tokens outputted on average per article
    d. our cost will then be $0.0005 * 1,400/1000 (since it is per 1k tokens) + $0.0015*27/1000 = $0.0007405
4. DALL-E calls are $0.04/image generated
5. 20*31*$0.0407405 = $25.26
6. Our pricing is mostly based on our costs and our competitors' costs. We will have one without image generation, at $9/user/month, which is just under pricing for Canva Pro, and a plan with image generation, at $50/user/month, which is below Jasper AI, a similar product with different use cases. Most large agencies will likely target the cheaper plan as they have extensive photography teams. The smaller news agencies do not have as

extensive of photo departments and must do more licensing to add images to their posts. With premium plans, Getty Images averages $0.11/image used, and with our number of 20 posts a day, brings image costs to $66/month just for image rights. Our product would allow them to save on this expense and remains competitively priced compared to similar products such as Jasper.

7. Four of the possible Instagram Stories formats generated by the same article

Why your $7 Latte is $7

Why is your latte so expensive? Dive into the rising costs behind your favorite coffee drinks and find out why your morning pick-me-up is pricier than ever.

Why your $7 Latte is $7

Why is that Pumpkin Spice Latte costing you more this fall? Find out the surprising reasons behind your expensive latte and barista pay in this eye-opening article.

Why your $7 Latte is $7

Prepare to shell out more for your favorite fancy coffee as prices soar. Discover why your latte is getting pricier and who's profiting in 2023.

Why your $7 Latte is $7

Coffee prices are on the rise, but why is that Pumpkin Spice Latte so expensive? Dive into the economics of your favorite fancy coffee drink in 2023.

8. Examples of images generated with sensitive topic bypass:
   a. Abortion:

b. Mental Health:

c. Middle East War:

d. Predator Arrest:

e. Shooting in Philly:

f. Ukraine Russia War: