Re-Imagining Photoshop - The AI Editor of 2030

Inter IIT Tech Meet '25

***Abstract*—The creative-editing world is growing fast, especially on mobile, but the workflow itself is still fragmented. Creators juggle multiple apps just to stay organized, gather inspiration, edit, and publish. Big players like Adobe, Canva, PicsArt, Pixlr, and CapCut lead the market, yet none offer a smooth, end-to-end creative experience. Our system fixes the messy creative workflow through two simple connected workflows. First, it takes a creator's scattered ideas (screenshots, sketches and photos) and automatically organizes them into a clear StyleSheet that captures their colours, fonts, textures, and overall look. Then, it uses that StyleSheet to support creation: rough sketches become clean visuals, edits stay consistent, and every output maintains the same style. In short, it helps creators stay organized, stay consistent, and create faster without losing their unique style.**

I. Market Research and Gap Analysis

A. Analyzing the Macro Trends

In recent years, the global AI image-editor market surged to **USD 7.77 billion** in 2024 and is forecast to reach **USD 66.65 billion** by 2032, growing at nearly **31%** annually. Already, nearly half of this market's revenue comes from mobile apps, showing a clear shift toward mobile-first visual editing. Over **60%** of editing apps now embed AI-based enhancements like auto-correction and background removal, showing strong user acceptance of AI-assisted workflows. Tasks that once took creators hours,like sorting references, picking colours, making moodboards, cleaning sketches, or fixing lighting are now quickly handled by AI, taking a lot of manual effort out of the process. Together, these numbers show a fast-growing, mobile-first creative ecosystem .

B. Analyzing Adobe

Adobe today holds a dominant position in the creative software market, generating **USD 21.5B** in FY2024 revenue, with **USD 12.7B** coming from Creative Cloud products such as Photoshop, Illustrator, and Lightroom. Among those users(**37 million** paid users), a large portion leverage core tools like Adobe Photoshop, which remains one of the most widely used creative tools globally, and the company reports that over **48%** of Creative Cloud subscribers have used its AI powered generative tool Adobe Firefly at least once.

C. Competitor Landscape

The creative-editing landscape in 2024–25 is dominated by a few big players with huge user bases and rapidly evolving AI tools. Canva leads the mainstream design market with **220M** monthly active users and **21M** paying subscribers, setting the benchmark for template-driven simplicity. PicsArt adds another **150M MAUs** and over **1B** downloads, capturing the mobile social-creator segment, while Pixlr serves **10M** MAUs in lightweight web editing. Beyond these, CapCut has emerged as the most disruptive mobile competitor with hundreds of millions of global creators, rapidly shipping AI effects, auto-editing, and multimodal features. At the high end, AI-native platforms like Midjourney and Runway influence visual style and creative direction for millions of designers.

Competitor & User Scale	Strengths (AI/UX) & Weaknesses
Canva 220M MAUs; 21M paid; 12.5% market	**Strengths:** Templates, auto-layout, beginner-friendly AI. **Weaknesses:** No deep editing; browser limits.
PicsArt 150M MAUs; 1B+ downloads	**Strengths:** Mobile-first; fun AI effects. **Weaknesses:** Not pro-grade; ads.
Pixlr ∼10M MAUs	**Strengths:** Lightweight; AI cutout. **Weaknesses:** Low precision; basic tools.
Affinity Photo ∼0.1% market share	**Strengths:** Pro tools; one-time purchase. **Weaknesses:** Minimal AI; slow updates.
CapCut Hundreds of millions of users	**Strengths:** Fast AI rollout; mobile-native. **Weaknesses:** Effects/template focused.

TABLE I: Competitor Landscape

D. Gap Analysis

Today's creative ecosystem is fragmented, unintelligent, and painfully manual. Photographers, designers, illustrators, and marketers constantly juggle 7–10 disconnected tools just to capture ideas, organize assets, build moodboards, edit, and publish, yet none of these tools understand their intent or style. Inspiration is buried in messy galleries, moodboards take forever to assemble, and editing still relies on old-school desktop sliders. Mobile tools feel limited, collaboration gets lost across files and chats, and nothing carries your creative context from one place to another. The outcome is slow, inconsistent and high-friction creation.

II. AI-powered features or editing workflows

A. Future Vision: Adobe Ecosystem of 2030

By 2030, we picture a creative ecosystem where every tool is connected, simple, and built around making creation easy. A system where:

- Creators can start editing a poster on their phone.
- Add illustrations on tablet during commute.
- Pick up the exact same project on his laptop/desktop with all layers, versions, & assets synced. No exports or transfers just simple device to device continuity.

B. Meta Workflow Overview

Our system helps convert raw inspiration into brand consistent creative output through a two part AI workflow. It starts by analyzing the user's preferences and works by helping them create on their own with the references. We used the LAION-5B, FANnet, DIS5K-TR and EasyOCR dataset.

C. Workflow 1: Inspiration driven Style Creation

It transforms scattered inspiration into a structured creative space. Users upload reference images, screenshots, sketches or any visual ideas. The system automatically enhances them, extracts visual features (colour, texture, fonts, material, composition, lighting, era, emotion), assigns smart tags, groups similarities, and generates a high-resolution personalized moodboard with the help of AI. With human-in-loop tag editing, these insights are built into a cohesive, exportable stylesheet which forms the user's visual identity in a reusable format.

User Pain Points Solved:

- Photographers, designers, illustrators, marketers all store hundreds of screenshots, saves, and photos across devices when seeking inspiration.
- This is extremely disorganized as nothing is easily searchable or connected.
- Creators waste hours compiling images into Pinterest/Figma/Notion just to visualize a theme.
- Most users know what they like, but they struggle to express it in a structured, design-ready form—whether it's colours, typography, layout styles, lighting, textures, eras, or emotions.

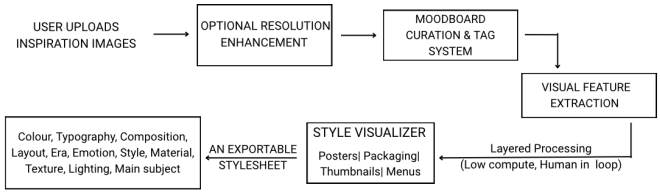

Fig. 1: Workflow 1: Inspiration Driven Style Creation

D. Workflow 2: Smart Editing & Creative Generation

It takes the StyleSheet generated in Workflow 1 and turns it into cohesive, high-quality creative space. The system applies the StyleSheet automatically, to images uploaded by the user ensuring colour, texture, typography, layout, and overall aesthetic remain perfectly aligned with the user's visual identity. Multimodal creation tools enable creators to generate or refine visuals keeping professional coherence through smart sketch interpretation, prompt-based editing or inpainting.

Users can sketch, prompt, edit, or upload images, and the system applies the StyleSheet automatically ensuring colour, texture, typography, layout, and overall aesthetic remain perfectly aligned with the user's visual identity. The system first interprets the user's sketch or drawing and generates an initial image based on it. This step combines AI understanding with human control: if the AI misinterprets the sketch, the user can quickly correct or override it. Through multimodal creation tools (sketch interpretation, prompt-based editing, inpainting, style transfer, relighting), creators can generate or refine visuals with professional coherence. Users can adjust and lock elements before exporting their assets in the final review layer.

User Pain Points Solved:

- Creators struggle to maintain the same colour tone, typography, lighting style, and overall aesthetic across multiple images, posts, or project deliverables.
- Beginners and professionals are often slowed down by traditional workflows that rely on complex layers, masking, sliders and constant manual corrections.
- Current tools cannot efficiently translate rough sketches or references that illustrators and designers rely on into sleek visuals.

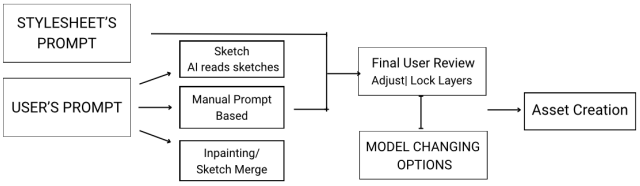

Fig. 2: Workflow 2: Smart refrences & Creative Generation

E. Privacy of Generated Output

To ensure user privacy and protect the exclusivity of their design style, the system follows a part by part asset generation approach. At no stage is the user's complete style, visual identity, or generated output stored on the system and only minimum temporary data is used for generation.

III. Expected Impact & Future Outlook

Implementing this system would help us organize and speed up the editing process by more than **20%**, reduce project turnaround time by atleast **30%** & increase feasibility for first creation mobile users. By 2030 with the innovation of Next-gen AI chips we are estimating atleast 5× more AI processing power than 2024 models increasing the compute power enabling faster real time AI generation to get better seamless product experience. Further extensions and applications can continue to evolve from this foundation.

Fig. 3: Visualizing the workflow: sketch, render, region selection, masking, and final recolor