STACKS

An AI-powered clip search app that employs content recognition and prompt-based searching to suggest suitable footage, assisting video content creation.

Problem

Initial Problem

Sep 2023
Research and build a tool to help video content creators streamline their creative process and produce high-quality, engaging content more easily by leveraging emerging technologies.

Design Question

Dec 2023
How can we help video creators efficiently select relevant and high-quality footage from their extensive video asset libraries during post-production?

Problem Statement

Amateur video creators frequently encounter challenges in the video selection process, which can be time-consuming. They often navigate through numerous or similar video files, manage videos across multiple devices, and lack real-time monitoring capabilities for action cameras. These barriers significantly impede their video creation efforts.
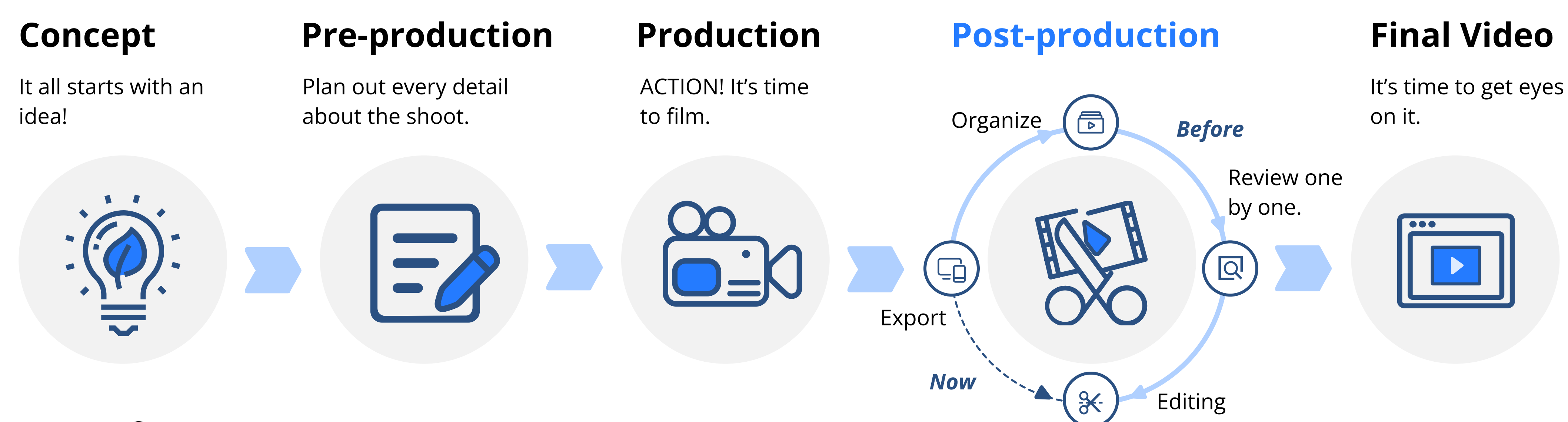
Solution

Mar 2024
Empowering video creation workflow with Stack: The AI-powered clip search solution.
Our innovative mobile application seamlessly integrates with cloud storage and employs content recognition to indexing videos. Simply describe the footage you need using natural language, and Stack scours and returns the most relevant clips in a flash. In this approach, users can add and manage multiple scenarios within a single project.
By streamlining video asset management and eliminating tedious manual search processes, Stack significantly enhances video creation efficiency, allowing creators to dedicate more time for creative expression.
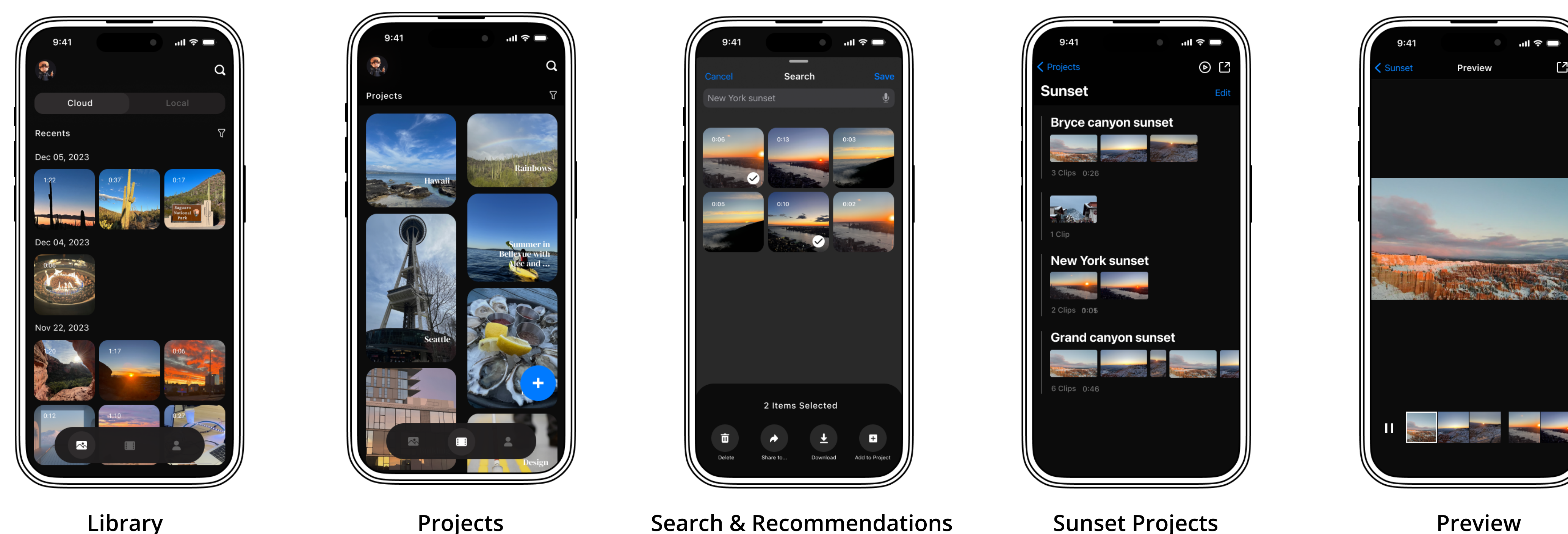
Process/Approach

Beginning with comprehensive secondary research, we explored the problems in video creation domain and existing solutions. So we decided to focus on the post-production stage. Subsequently, we conducted primary research through interviews with video creators from amateurs to professionals, to identify pain points and user scenarios.
Armed with these insights and the support from Meta professionals, we started crafting design solutions. We conducted three rounds of evaluation to continuously assess and iterate upon our prototypes.
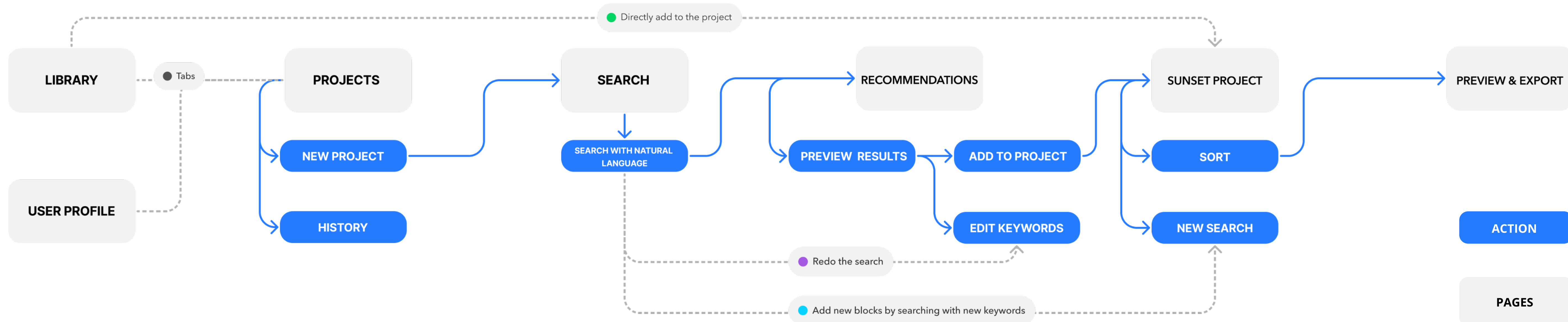
Product

Video Production Process

Concept	Pre-production	Production	Post-production	Final Video
It all starts with an idea!	Plan out every detail about the shoot.	ACTION! It's time to film.	Organize / Before / Review one by one / Now / Export / Editing	It's time to get eyes on it.

Interface

Library   Projects   Search & Recommendations   Sunset Projects   Preview

User Flow

Software Diagram

Frontend — SwiftUI
- Select & Upload Videos
- Create, Get, Update, Delete Projects
- Create, Get, Update, Delete Prompt Blocks
- Create, Get, Update, Delete Prompt Blocks
- Preview & Export Project to Editing App

Backend
- Extract Key Frames
- Extract features and Generate description for each key frame
- Tagging & Categorization
- Summarization of footage
- This video is a travel footage that was shot at a Beach during a Fall season with two people in the frame.
- Google Cloud

MongoDB — Database for App
Cloudinary — StaticDatabase for Videos
OpenAI Encoder
Pinecone — Vector Database for Prompts

Highlights

😊 **For Amateur Creators**
A joyful video productivity app designed for amateur video creators

✦ **GenAI Powered**
Prompt-based video indexing and searching to enhance creativity, supported by GenAI

▦ **Block Editing**
Explore new interaction design in video editing to to simplify the process