

Release Summary

Product Name: ChatCut

Team Name: ChatCut Development Team

Date: December 2025

Key User Stories and Acceptance Criteria

The following key user stories serve as the main acceptance test guide for the delivered release.

US 1.1 — Timeline Selection

Sprint 1 Plan

User Story:

As a user, I want to select start and end times on the timeline so that the system knows which portion of the clip I want to modify.

Acceptance Criteria

- User can select a contiguous region on the Premiere timeline.
 - Selection data (start, end, clip ID) is captured and stored.
 - Selected region is retrievable by other system components (backend / effects).
 - UI provides visible confirmation of selection.
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US 1.2 — Natural Language Prompt Panel

Sprint 1 Plan

User Story:

As a user, I want a floating prompt panel so that I can type natural-language effect requests.

Acceptance Criteria

- Panel renders within Adobe Premiere Pro.
 - User can enter and submit a text prompt.
 - Valid prompt is logged and forwarded to backend.
 - Invalid prompt displays an error message without plugin failure.
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US 2.1 — Request Editing in Plain English

Sprint 2 Plan

User Story:

As a user, I want to describe how I want my video edited in plain English so that ChatCut can automatically perform the correct actions.

Acceptance Criteria

- Natural-language prompt is sent to backend AI.
 - Backend returns a structured list of Premiere API actions.
 - The returned actions are executable by the plugin.
 - Edit occurs without requiring user scripting or manual API calls.
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US 2.2 — Map AI Output to Premiere API

Sprint 2 Plan

User Story:

As a user, I want ChatCut to know which Adobe Premiere Pro functions to call for my requested edit so that it can perform the change automatically.

Acceptance Criteria

- Model output maps to valid Premiere API operations.
 - Translation layer provides correct parameters (e.g., zoom %, rotational angle).
 - Function sequence runs end-to-end without corruption of timeline state.
 - Sample edits validate mappings.
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US 2.3 — Object-Targeted Editing

Sprint 2 Plan

User Story:

As a user, I want ChatCut to recognize objects in my video so that I can make edits that target specific items.

Acceptance Criteria

- Frames can be extracted from clip assets.
 - An object detection model (YOLO/OpenCV/TensorFlow) identifies visual objects.
 - Bounding boxes or coordinates are returned to the UI/backend.
 - Targeted edits apply to detected objects (not entire frame).
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US 3.1 — Processing Feedback

Sprint 3 Plan

User Story:

As a user, I want a progress indicator during AI processing so that I know the system is working.

Acceptance Criteria

- UI displays a visible indicator during backend processing.
 - Indicator persists until model response or error occurs.
 - User can continue interacting with the prompt panel during processing.
 - Input field supports copy/paste workflows while waiting.
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US 3.2 — Undo AI-Applied Effects

Sprint 3 Plan

User Story:

As a user, I want to undo AI-applied effects so that I can revert to the original clip instantly.

Acceptance Criteria

- Undo reverts most recent AI-generated effect.
 - Undo functions across different effect types.
 - Visual history sidebar reflects undo state.
 - Undo does not corrupt timeline or media assets.
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US 3.3 — Object Tracking Overlay

Sprint 3 Plan

User Story:

As a user, I want accurate object tracking and clear visual overlays so that effect controls reflect what is happening in the video.

Acceptance Criteria

- Object-tracking overlay is rendered inside the plugin UI.
 - Overlay positions match backend detection results.
 - Tracking remains stable across multiple clips and effect workflows.
 - Known limitations are documented.
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US 4.2 — Reliable Audio Effects

Sprint 4 Plan

User Story:

As a user, I want audio effects to work reliably so that I can enhance audio tracks.

Acceptance Criteria

- Audio effect operations execute end-to-end.
 - Failure scenarios are documented.
 - Fixes reduce or eliminate silent-track occurrences.
 - Plugin avoids destructive overwrites of original audio.
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US 4.3 — Multiple Prompt Chains

Sprint 4 Plan

User Story:

As a user, I want to apply multiple prompts so that I can layer edits easily.

Acceptance Criteria

- Multiple prompt chains can be processed in sequence.
- Conflicting edits are resolved predictably.

- Backend supports multi-effect sequencing.
 - Layered edits preserve timeline integrity.
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US 4.4 — Effects History

Sprint 4 Plan

User Story:

As a user, I want an effects history so that I can see and revisit changes.

Acceptance Criteria

- Effects are stored chronologically.
 - UI displays a navigable edit history.
 - History integrates with undo/redo logic.
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US 4.6 — Backend Object Tracking Integration

Sprint 4 Plan

User Story:

As a user, I want object tracking connected to the backend so tracked effects can be applied automatically.

Acceptance Criteria

- YOLO outputs link to backend endpoints.
 - Tracking coordinates applied to Premiere effects.
 - End-to-end pipeline successfully tested on clips.
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Known Problems

Below are major issues, omissions, and design shortcuts observed or documented.

- **AI Interpretation Ambiguity**

Model occasionally returns incorrect or hallucinated API operations when prompts are vague.

Related to Sprint 2 natural-language interpretation.

Sprint 2 Plan

- **Audio Processing Instability**

Audio effects fail under some edit contexts; reliability inconsistent.

Related to Sprint 4 audio effect testing.

Sprint 4 Plan

- **Object Tracking Drift**

Tracking overlays may misalign during layered effect sequences or under varied lighting.

Related to Sprint 3 integration and QA.

Sprint 3 Plan

- **Undo Limitations**

Undo does not fully support multi-prompt or stacked effects.

Related to Sprint 3 and Sprint 4 undo testing.

- **UI Responsiveness**

Floating prompt panel and progress indicators lag during long backend calls.

Related to Sprint 1 UI and Sprint 3 progress feedback.

- **Design Shortcuts**

- Hard-coded API mappings from AI responses.
 - Early-stage detection models for object recognition.
 - Lack of automated tests for prompt chaining.
Related to Sprint 2 and Sprint 4 technical debt.
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Product Backlog

High-priority future work items for follow-on project teams:

- **AI Guardrails**
 - Validate model output before applying API actions.
 - Prompt clarification requests when input is ambiguous.
- **Undo/Redo Improvements**
 - Multi-effect undo stacks.
 - Per-object revert capability.
 - Timeline-safe rollback operations.
- **Audio Pipeline Stabilization**
 - Replace brittle API-only approach.
 - Anti-destructive processing and non-overwrite policy.
- **Object Tracking Enhancements**
 - Confidence thresholds and manual override options.
 - Editable bounding boxes or handles in UI.
- **Prompt Orchestration**
 - Dependency-aware sequencing.
 - Parallel execution for non-conflicting prompts.
- **UI Consolidation**
 - Centralized panel combining prompt input, progress, and history.
- **Video-to-Video Consistency**
 - Improved generation reliability via fallback models.

- Repeatability testing on real user clips.