Final Project: Affinity Mapping Report

Scroll Sense - A User-Centered AI Tool for Social Media Management

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Date: October 30, 2025

1. Data Preparation

Data Sources Collected:

- **2 In-depth interviews** with university students (30-45 minutes each)
- **Survey responses** with open-ended questions about social media habits
- **Total qualitative data points:** ~50+ distinct observations

Data Cleaning Process:

1. Transcribed audio recordings verbatim
2. Removed identifying information to protect participant privacy
3. Extracted individual quotes and observations into separate data points
4. Organized raw data by participant and question theme
5. Highlighted key phrases and repeated patterns across responses

Participant Demographics:

- Tech-comfortable users (students, young professionals)
- Active social media users across multiple platforms
- Self-aware about excessive scrolling impacting productivity
- Have tried existing tools (iPhone screen time, app blockers) with limited success

2. Affinity Mapping Process

Methodology:

We conducted affinity mapping by:

1. Writing each observation/quote on individual sticky notes (digital)
2. Spreading all data points across a workspace
3. Moving related items together without predetermined categories
4. Allowing natural clusters to emerge from the data
5. Naming each cluster based on the essence of grouped items
6. Iterating and refining clusters until stable patterns emerged

Clustering Approach:

- **First pass:** Grouped by surface similarities (mentions of same apps, similar behaviors)
- **Second pass:** Identified deeper connections (underlying motivations, emotional patterns)
- **Final pass:** Consolidated into 6 major theme clusters with clear boundaries

3. Key Themes & Insights

Theme 1: The "Just 5 More Minutes" Trap - Intention-Behavior Gap

Cluster Evidence:

- "Once I open it, I always want to come out in like five minutes or 10 minutes, but usually just goes longer than that"
- "I start looking at something and I stay on that, not knowing much time has passed"
- "That happens almost every day... doom scrolling"
- Survey mentions: "lose track of time," "always longer than intended"

What This Reveals: Users have clear intentions when opening social media ("I'll just check for 5 minutes") but consistently fail to follow through. This isn't occasional—it's a daily pattern. The gap between intention and behavior is wide and persistent.

Context & Problem: This reveals that users aren't lacking awareness or desire to control their usage. They actively set mental time limits but lack in-the-moment support to honor those intentions. Current tools don't bridge this gap because they either set arbitrary limits (not tied to the user's actual intention) or provide alerts too late.

Theme 2: Short-Form Content = Infinite Loops ("Just One More")

Cluster Evidence:

- "Instagram is my main concern... mainly because of the reels. Since there are only a few seconds long, it's usually very hard to come out of the loop"
- "Quick content where I get to gain more information in just a few minutes"
- "It is also impacting my attention span to some extent"
- Multiple references to reels, shorts, infinite scrolling

What This Reveals: Short-form video content (Instagram Reels, YouTube Shorts, TikTok) is uniquely addictive. Each piece feels like "just one more minute," masking cumulative time. Users recognize this format is changing their attention span and making it harder to engage in sustained, focused work.

Context & Problem: Platform design actively works against user intentions. Autoplay and infinite scroll eliminate natural stopping points. Users need platform-specific interventions that account for these high-velocity content formats.

Theme 3: "Too Easy to Ignore" - Existing Tools Fail

Cluster Evidence:

- "Most of the times I've finished it and I always override the logs and open the app again"
- "It's just one button that I can click on and it just opens up the app again"
- "It kind of gets irritating after a while, so I don't use it"
- Survey: "easy to bypass," "annoying," "not helpful"

What This Reveals: Users have tried iPhone screen time limits and app blockers but abandoned them. The failure isn't from lack of trying—it's from poor design. Tools are either too rigid (causing resentment and override behavior) or too weak (one-tap bypass makes them meaningless). Generic reminders become background noise.

Context & Problem: This reveals a critical design challenge: interventions must balance being effective without being annoying. Users want help but reject heavy-handed control. The "extend 15 more minutes" button epitomizes the problem—it defeats the purpose entirely.

Theme 4: Not All Scrolling Is Equal - Mixed-Purpose Use

Cluster Evidence:

- "I use LinkedIn a lot [for jobs]... I use Instagram as a means of entertainment"
- "There are some advantages of using these social media apps"
- "It's important for me to know about what is happening around me, but also it's not like I have to spend hours in it"
- Platform variety: LinkedIn (professional), Instagram (social/entertainment), Reddit (information/life hacks)

What This Reveals: Social media serves legitimate purposes: job searching, staying informed, maintaining relationships, learning. Users don't want to eliminate social media—they want to eliminate *mindless* use. Blanket time limits feel unfair because they punish productive use along with idle scrolling.

Context & Problem: One-size-fits-all solutions fail because they ignore context. Users need tools that distinguish between "I'm posting a job update" versus "I'm watching my 20th reel in a row." Context-awareness is essential for user acceptance.

Theme 5: Post-Scroll Guilt Creates Vicious Cycles

Cluster Evidence:

- "Sometimes I know I wasted a lot of time in it, but then again, I feel like even if I start working, I wouldn't be as interested as I was before"
- "Once I don't feel like working, I'll just go back to Instagram and watch the reel again"
- "It's kind of a weird feeling, which doesn't allow me to work"

What This Reveals: After extended scrolling, users feel guilty and unmotivated. This creates a negative feedback loop: scroll too long → feel guilty and can't focus on work → return to social media to escape guilt → feel worse. The emotional aftermath makes productive work harder, not easier.

Context & Problem: This reveals that interventions need to address not just the scrolling behavior but the transition back to focused work. Users need support exiting social media in a positive mental state rather than shame-based motivation.

Theme 6: Privacy vs. Personalization Paradox

Cluster Evidence:

- "I wouldn't prefer the social media app to read my calendar or deadlines"
- BUT "If the third party app... I don't really have any problem with sharing my information to it"
- "If the message is personalized, I would not mind it"
- Positive reaction to deadline reminders when properly positioned

What This Reveals: Users want personalized help ("You have a meeting in 30 minutes") but distrust social media platforms accessing their data. However, they're comfortable with independent third-party tools that sit between their calendar and social media.

Context & Problem: Personalization significantly increases intervention effectiveness, but trust is fragile. The solution isn't to avoid personalization—it's to position the tool correctly as an independent privacy-respecting assistant, not a platform feature.

4. Application to Final Project: Scroll Sense

How Insights Inform Design Direction:

Based on our affinity mapping, we've identified **6 core features** for Scroll Sense, prioritized by impact and user need:

HIGH PRIORITY FEATURES:

A) Session Intent Prompt (Theme 1, 6)

Feature: When a user opens a social media app, show a lightweight prompt: "What's your goal? Quick 5-min check / Specific task / Just browsing"

Why this insight matters:
 Theme 1 showed users set implicit intentions but don't articulate them. By making intentions explicit at entry, we anchor behavior to a concrete commitment.

Design changes based on findings:

- Must be quick (< 5 seconds to complete) or users will dismiss
- Include preset time options from interviews (5 min, 10 min, 20 min)
- Store intent to enable time-aware nudges later in session

Implementation: Modal overlay on app open; requires active selection before proceeding

B) Progressive Visual Friction (Themes 2, 3, 7)

Feature: Screen gradually blurs as time passes, subtle at first, stronger over time. Users can always "Continue 10 more minutes" but must actively choose.

Why this insight matters:
 Theme 3 showed hard blocks trigger override behavior, but Theme 2 showed users lose time awareness. Progressive friction provides escalating awareness without forcing a hard stop.

Design changes based on findings:

- Start blur at user's stated time goal (not arbitrary 30 minutes)
- Multiple interview quotes requested "mild blurring where I can't really comprehend the reel, but it allows me to think"
- Include "Continue" button to preserve autonomy (critical for user acceptance)
- For reels/shorts: Pause after every 15 videos (addresses Theme 2's "just one more" loop)

Implementation: CSS blur filters with progressive opacity (0% - 70%); counter overlay on reels requiring intentional tap

C) Purposeful vs. Idle Detection (Theme 4)

Feature: Detects whether a user is doing a specific task (posting, messaging, job searching) vs. mindlessly scrolling. Apply lighter interventions during purposeful use.

Why this insight matters:
  Theme 4 revealed users resent blanket limits because not all social media time is wasted. Context-awareness dramatically improves user acceptance.

Design changes based on findings:

- LinkedIn: Minimal intervention when on jobs tab or editing profile
- Instagram: Detect posting/messaging vs. feed scrolling
- Reddit: Track subreddit types (educational vs. entertainment)
- Only show friction during idle scrolling, not legitimate tasks

Implementation: Monitor scroll velocity, interaction patterns (typing/clicking vs passive viewing), and URL paths to infer intent

MEDIUM PRIORITY FEATURES:

D) Adaptive, Respectful Prompts (Theme 3, 5)

Feature: Learn from user dismissals. If the user ignores 70%+ of prompts, reduce frequency. Offer 3 tone styles (encouraging/neutral/direct).

Why this insight matters:
 Theme 3's "gets irritating after a while" quote shows generic repeated prompts cause tool abandonment. Adaptation prevents habituation.

Design changes based on findings:

- Every prompt includes: "Snooze 5 min," "Not now," "Continue 10 min" (preserves autonomy)
- Track which tone style works best per user
- Adjust intervention timing based on override patterns

Implementation: Log user responses; optimal prompt frequency/tone per user

E) Post-Session Reflection (Theme 5)

Feature: When exiting, show brief card: "You spent 23 min (planned: 10). Was this time well spent?" + transition suggestion

Why this insight matters:
 Theme 5 showed guilt cycles harm productivity. Non-judgmental reflection builds awareness without shame and provides a smooth exit ramp.

Design changes based on findings:

- Keep very brief (< 10 seconds)
- Include transition activities: "Try: 5-min walk / glass of water / start with easiest task"
- Tone is curious, not accusatory
- Data informs future intent-setting

Implementation: Exit modal triggered on platform departure; stores reflection for analytics

F) Platform-Specific Templates (Themes 2, 4)

Feature: Pre-configured settings per platform. Instagram Reels: 10 min limit. LinkedIn: 30 min professional mode. YouTube Shorts: pause every 10 videos.

Why this insight matters:
 Theme 4 showed different platforms serve different purposes. Theme 2 showed reels/shorts need special handling. One-size-fits-all fails.

Design changes based on findings:

- Instagram: Separate limits for Feed (20 min) vs Reels (10 min) based on user feedback
- LinkedIn: Relaxed mode (30 min) since often used for job searching
- Reddit: Per-subreddit tracking
- Users can customize but templates provide good defaults

Implementation: Detect platform via URL; load corresponding config profile; detect feed type for granular rules

What Features We WON'T Include (Based on Findings):
- **Hard app blocking:** Theme 3 showed users will bypass or abandon tool
- **Shame-based messaging:** Theme 5 showed guilt worsens the problem
- **Platform-integrated solution:** Theme 6 showed privacy concerns with social media accessing calendars
- **Generic daily time limits:** Theme 1 showed these ignore user's actual intentions; Theme 4 showed they punish good usage
- **Repetitive alarms:** Theme 3 showed these become "irritating" and get disabled

Success Metrics (Based on Themes):

Behavioral Metrics:

- Reduce time overshoot by 40% (addresses Theme 1's intention-behavior gap)
- Increase completion of session goals from ~20% to ~60%
- Reduce daily app opens by 15-20%

Experience Metrics:

- "Not annoying or intrusive": 75%+ agreement (addresses Theme 3's failure mode)
- "Helps me feel in control": 80%+ agreement (addresses Theme 5's guilt cycle)
- Override/disable rate: <30% (addresses Theme 3's bypass behavior)

Engagement Metrics:

- 70%+ retention after 2 weeks (critical test of Theme 3's "gets irritating" pattern)
- 50%+ opt-in for calendar integration (validates Theme 6's trust model)

Conclusion

Our affinity mapping revealed a consistent pattern across interviews and surveys: users struggle not from lack of awareness but from lack of in-the-moment support. They set intentions but overshoot. They try existing tools but find them either too rigid (causing override behavior) or too weak (easily ignored). They

use social media for legitimate purposes but slip into mindless scrolling. They feel guilty after long sessions but struggle to refocus on work.

Scroll Sense directly addresses these findings by:

1. **Anchoring behavior to explicit intentions** at session start (Theme 1)
2. **Providing progressive, respectful friction** that increases awareness without forcing stops (Themes 2, 3)
3. **Distinguishing purposeful from idle use** to avoid punishing legitimate activities (Theme 4)
4. **Supporting positive transitions** back to work instead of inducing guilt (Theme 5)
5. **Respecting privacy** through independent third-party positioning (Theme 6)

The insights from affinity mapping fundamentally shaped our feature priorities, interaction style, and success metrics. Without this qualitative analysis, we might have built another "easily bypassed" or "irritating" tool that users abandon. Instead, we're designing interventions that respect user autonomy while providing genuine support at the moments that matter most.