Engagement & Attention Analytics Privacy Checklist

Get the diagnostic value of engagement heatmaps and attention analytics while staying inside GDPR, FERPA, and the EU AI Act. Engineering guidance, not legal advice.

A. Capture heatmap data with the standards

- [ ] Emit xAPI Video Profile events with played-segments (played, paused, seeked, terminated)
- [ ] Stitch each viewing session by its registration before aggregating
- [ ] Default to the anonymous population (cohort) heatmap — no learner identity
- [ ] Aggregate played-segments across sessions into a per-second play-count array

B. Choose privacy-respecting attention proxies

- [ ] Detect lost focus with the Page Visibility API; pause playback when the tab is hidden
- [ ] Add idle detection and interaction cadence (pauses, seeks, notes) as attention signals
- [ ] Use a periodic 'are you still watching?' checkpoint where presence matters
- [ ] Never count watch-time for a backgrounded or minimised tab

C. Stay inside the privacy and legal line

- [ ] Do NOT ship AI emotion or 'engagement' inference for EU education (EU AI Act Art. 5)
- [ ] Treat webcam gaze / eye-tracking as GDPR Art. 9 biometric special-category data
- [ ] Get explicit consent and a real non-biometric alternative — consent is fragile in education
- [ ] Treat identifiable engagement data as a FERPA education record (US); sign vendor agreements
- [ ] Disclose collection, minimise fields, and set a retention and deletion schedule

D. Turn signals into action

- [ ] Pale skipped intro: trim it and move the hook to second zero
- [ ] Drop-off cliff at a fixed time: re-cut or chunk the lesson (about a 6-minute ceiling)
- [ ] Re-watch hotspot: overlay a quiz result to tell importance from confusion
- [ ] Tab-focus lapses at one point: the content stopped holding attention there

Companion to: 'Engagement Heatmaps and Attention Analytics'
www.forasoft.com/learn/elearning-video/articles-elearning/engagement-heatmaps-attention-analytics



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This checklist helps you build engagement heatmaps and attention signals for learning video while staying inside GDPR, FERPA and the EU AI Act. Our seven-volume handbook covers the video stack under a course platform; start with Volume 3 for players and QoE monitoring, then Volume 1 for encoding and Volume 4 for audio and accessibility.

WHAT YOU WILL FIND INSIDE

- Player events and QoE monitoring (Vol. 3)
- Captions, loudness and accessibility (Vol. 4)
- Encoding lessons efficiently (Vol. 1)

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Vol. 2 · Video Streaming I — network transport, contribution and ingest, HLS, MPEG-DASH, CMAF

Vol. 3 · Video Streaming II — ABR, CDNs, players, WebRTC, DRM and the economics of delivery

Vol. 4 · Audio for Video I — PCM, codecs, loudness, accessibility, real-time voice processing

Vol. 5 · Audio for Video II — jitter buffers, lip sync, Atmos, quality metrics, neural codecs

Vol. 6 · AI for Video I — models and inference, computer vision, speech, search, generative video

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