

TTV PHASE IV — 7-DAY TASK

Engineer: Soham Kotkar — Lead

Mission:

Convert the entire TTV pipeline into a modular, multi-owner system where any engineer can take over any module within 24 hours, with no single person becoming a dependency.

**[https://github.com/blackholeinfiverse10/
LoRA_TextToVision/tree/
task_quality_harden_secure](https://github.com/blackholeinfiverse10/LoRA_TextToVision/tree/task_quality_harden_secure)**

This is the repo.

DAY 1 — System Absorption & Topology Mapping

Deliverables:

- TTV Pipeline Topology Map (high-level view)
- All module boundaries listed (inputs/outputs/dependencies)
- No cross-coupling zones identified

Focus Areas:

- identity_memory
- scene_memory
- narrative_sequencer
- emotion_controller
- cinematic_transition_core
- smart_video_extender
- RL router
- Watermark/security chain
- Keyframe → motion → extend pipeline

DAY 2 — Module Boundary Maps (Deep-Dive)

Deliverables:

- For each major module:
 - What it consumes
 - What it produces
 - What it depends on
 - What can be swapped
 - What breaks if removed (and why)

Goal:

Make it possible to swap out any one module without touching others.

DAY 3 — Ownership Clustering Framework

Create multi-owner clusters:

Cluster A – Intelligence Layer

Scene, identity, narrative, emotion

Cluster B – Motion Layer

AnimateDiff, transitions, extender, interpolation

Cluster C – Production Layer

Upscaler, lipsync, watermarking, router, fallback

Deliverables:

- Primary + Secondary + Backup owners (roles only, no names)
- Clear responsibilities

- No module left without a backup owner

Goal:

System survives even if any engineer leaves tomorrow.

DAY 4 — Swapability Test Suite (Reliability Tests)

Deliverables:

- Swap Emotion Controller Test
- Swap Identity Memory Test
- Swap Interpolator Test
- Swap Scene Memory Test

Requirement:

Pipeline must still generate a video end-to-end even with stub modules.

Goal:

Zero hard coupling. No brittle dependencies.

DAY 5 — Failure Mode & Repair Catalog

Deliverables:

- List of top 10 pipeline failures
- For each:
 - Why it happens
 - How to detect it
 - How to fix it
 - Impact on pipeline
 - Safe fallback behavior

Goal:

Any engineer can debug ANY failure in under 10 minutes.

DAY 6 — Ownership & Migration Docs

For every module (folder):

- OWNER.md → Responsibilities, contact roles
- MIGRATION.md → How to transfer this module to a new engineer
- REPAIR.md → Fix instructions for common breakpoints
- TIME-TO-MASTER.md → “How long does it take to understand this module?”

Goal:

Plug-and-play engineering. No tribal knowledge.

DAY 7 — Final Integration + Readiness Validation

Deliverables:

- Final Modular Architecture Summary
- Final Distributed Ownership Map
- Final Swap Tests Report
- Confirmation that TTV is now:
 - multi-owner
 - handover-friendly
 - modular
 - resilient
 - future-proof
 - compatible with upcoming film generation pipeline

Goal:

TTV becomes a professional, modular service that no one person owns.

ONE-LINE MISSION FOR SOHAM

“Make TTV modular, multi-owner, and impossible for any single engineer to bottleneck or break.”