TL;DR
Wan2.2-Animate-14B is an open-weight character animation model with two modes: **Animation** (drive a static image) and **Replacement** (swap subjects in existing footage).
It pairs skeleton + facial feature control with a Relighting LoRA to keep motion faithful and lighting consistent.
Verify licensing, latency, and GPU requirements in your environment before scaling deliverables.

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1. Release snapshot - what actually shipped

- **Launch date & channels:** Wan-AI published Wan2.2-Animate-14B on Sept 19, 2025 with weights, scripts, and demos on Hugging Face, ModelScope, and wan.video (Wan-AI release notes).
- **Unified task coverage:** One checkpoint handles both character animation and subject replacement by switching runtime flags, avoiding separate models for each scenario (Wan-Animate project page).
- **Open-source posture:** Code + weights live under the Wan2.2 repo with consumer-grade inference options (RTX 4090 class for 720p/24–25fps), enabling on-prem or cloud deployments without SaaS lock-in (Wan-AI release notes).
- **Hands-on verdict:** Early testers report four-minute turnarounds for 10-second clips at 720p/25fps through the hosted UI, with micro-expression fidelity and auto-relighting intact (Skywork hands-on).

2. How the pipeline works under the hood

2.1 Condition design

Wan-Animate refines Wan2.2's image-to-video backbone by splitting inputs into symbolic channels: skeleton heatmaps steer body pose, implicit facial embeddings preserve expression, and segmentation masks isolate regions for editability (Wan-Animate project page). This separation keeps the denoiser controllable without retraining for every rig.

2.2 Dual modes in practice

Mode	Use case	CLI flag	What to watch
Animation	Drive a static character with a performer clip	default `generate.py --task animate-14B --refert_num 1`	Keep reference video 2–30s, short side above 200px, files under 200 MB (Skywork hands-on)
Replacement	Swap the subject while keeping original scene	add `--replace_flag --use_relighting_lora`	Preprocess segmentation masks and ensure lighting continuity (Wan-AI release notes)

2.3 Relighting & compositing

A dedicated Relighting LoRA reprojects lighting from the source footage onto the generated character for mix-mode, trimming the usual “AI composite” glow. Because it is modular, teams can fine-tune or disable it when stylised looks are preferred (Wan-Animate project page).

2.4 Preprocessing checklist

The reference pipeline expects skeleton extraction, face crops, and region maps. Wan provides `preprocess_data.py` scripts with `--retarget_flag` (animation) or `--replace_flag` (swap) parameters so you can automate data prep inside a CI job before inference (Wan-AI release notes).

3. Creative ops playbook

3.1 Rapid prototyping

Marketing and social teams can prototype hero shots by feeding storyboard stills plus rehearsal clips. Hosted tiers (`wan-pro` at 25fps, `wan-std` at 15fps) provide fast validation before you schedule heavier local renders (Skywork hands-on).

3.2 Production integration

- **Shot planning:** Log video context (camera moves, lighting, time of day) so editors know when to lean on Relighting LoRA versus manual grade.
- **Performance library:** Build an internal catalog of approved motion clips (dance loops, presenters, subtle expressions) to keep campaign tone consistent.

- **Compliance review:** Because replacement mode can alter on-camera talent, run brand and legal checks before publishing anything resembling deepfakes.

3.3 Post-processing guardrails

Exported MP4s arrive at 720p. Plan for upscaling or interpolation if deliverables require native 1080/4K. Pair outputs with Adobe Frame.io or Descript for collaborative reviews, and archive project metadata (prompt, clip IDs, commit hash) per compliance policy.

4. Adoption worksheet

- ✅ Confirm GPU availability (local 4090 / rented A10G) for batch runs; benchmark latency with both modes.
- ✅ Document the preprocessing flow so designers aren't hand-scrubbing masks in Photoshop.
- ✅ Pilot with lower-stakes assets (training clips, internal explainers) before rolling into ad campaigns.
- ✅ Update brand guidelines to cover synthetic talent use, especially for region-specific regulations.

5. Resources

- Wan2.2-Animate-14B release notes, scripts, and CLI
- Wan-Animate research page (architecture + relighting LoRA)
- Skywork creator review with input specs and mode breakdown

References

- Wan2.2 (GitHub)
- CG-Taylor Acceleration (arXiv)
- AnimateDiff (GitHub)
- AnimateDiff (arXiv)