ClawGUI: One Framework to Train, Evaluate, and Deploy GUI Agents on Real Devices

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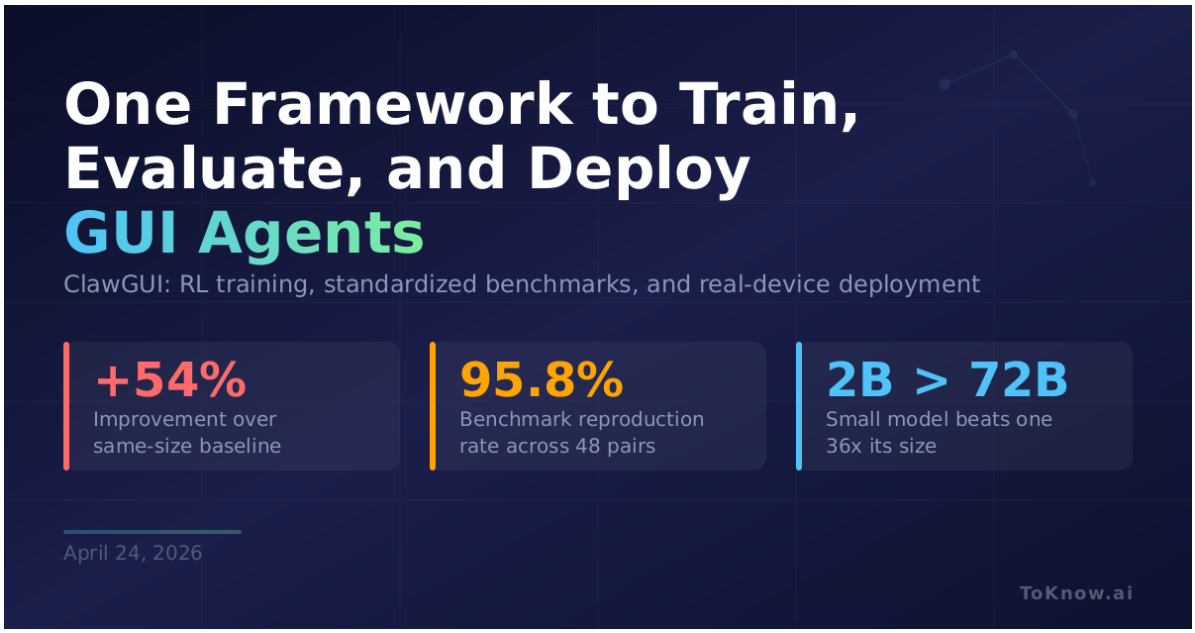

Zhejiang University released ClawGUI, an open-source framework covering the full lifecycle of GUI agents (AI that controls apps by tapping, swiping, and typing on real screens): RL training, standardized evaluation, and deployment to real devices. ClawGUI-RL runs dozens of Docker-based Android emulators in parallel for online training and also supports training on physical phones. It pairs GiGPO with a Process Reward Model to score each interaction step

individually, so the model gets feedback on every tap and swipe rather than just a pass/fail at the end of a multi-step task. ClawGUI-Eval standardizes evaluation across 6 benchmarks and 11+ models, reproducing 95.8% of officially published scores. ClawGUI-Agent deploys trained agents to Android, HarmonyOS, and iOS via 12+ chat platforms with persistent personalized memory. ClawGUI-2B, a 2B-parameter model trained entirely within this pipeline, reaches 17.1% success rate on MobileWorld GUI-Only, a 54% relative gain over the same-size MAI-UI-2B baseline and higher than UI-Venus-72B, a model 36x its size.

Standard RL for GUI tasks (GRPO) gives a single reward at the end of a 50-step phone interaction, so a wrong tap early on gets the same credit as the correct final action. GiGPO clusters steps that reach the same screen state and compares outcomes, giving the optimizer per-step signal. This alone boosted success rate from 14.5% to 17.1%. The 95.8% reproduction rate across 48 model-benchmark pairs means published GUI agent scores are finally comparable across papers, something the field badly needed.

Infrastructure matters more than model scale for GUI agents. A 2B model with dense step-level supervision and stable parallel training outperforms a 72B model without it. As training frameworks mature, the bottleneck shifts from building capable models to engineering reliable pipelines. ServiceNow's CUA-Suite provides complementary desktop-focused data for this kind of training.

Sources:

- ClawGUI Paper (arXiv)
- ClawGUI GitHub Repository
- ClawGUI Project Page
- ClawGUI-2B Model (HuggingFace)
