

Pendless

Pendless vs. Perplexity's Comet Browser

Benchmarking Report — November 2025

Executive Summary

Pendless conducted a head-to-head benchmark against Perplexity's Comet Browser Agent using an identical set of 34 automation prompts. The benchmark evaluated four core dimensions critical to browser-based automation performance: execution speed, precision, recall, and general error rate.

Pendless outperformed Comet across every metric, demonstrating superior task accuracy, higher workflow completeness, increased reliability, and significantly faster execution. These results validate Pendless' architecture as a best-in-class automation engine and highlight its readiness for broad deployment across SMB and enterprise environments.

Benchmark Overview

Test Scope

- **Tools evaluated:**
 - Pendless Browser Automation Engine
 - Perplexity Comet Browser Agent
- **Dataset:**
 - 34 standardized prompts representing common business workflows
 - Prompts included: form completion, multi-step data movement, navigation, and file actions
- **Environment:**
 - Same browser environment
 - Same websites
 - Same task descriptions
 - Same evaluation criteria

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Objectives

1. Compare agent performance under realistic browser-task conditions.
2. Measure accuracy, completeness, error rates, and total execution time.
3. Validate stability and reliability of the Pendless engine ahead of launch.

Key Metrics and Definitions

Precision

Definition:

Percentage of actions the agent executed correctly *from the subset of actions it attempted*.

Why It Matters:

High precision reduces misclicks, hallucinated actions, incorrect field selections, and unintended page transitions.

Recall

Definition:

Percentage of expected workflow steps that the agent successfully executed *from the total required steps*.

Why It Matters:

High recall ensures workflows are completed end-to-end without skipped steps or premature termination.

Execution Time

Definition:

Average time required for each agent to complete a prompt from start to finish.

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Why It Matters:

Execution speed directly impacts throughput, scalability, and ROI for automation in production environments.

General Errors

Definition:

Workflow-blocking errors including:

- agent failures
- navigation breakdowns
- unresolved page states
- incorrect task completions

Why It Matters:

Lower error rates correlate with higher reliability and lower human oversight.

Results Summary

Performance Comparison Table

<u>Metric</u>	<u>Pendless</u>	<u>Comet</u>
Number of Prompts	34	34
Avg Execution Time per Prompt	23.4 sec	2 min 13 sec
Precision	97.2 percent	93.3 percent
Recall	97.9 percent	93.6 percent
General Errors	0	6

Overall: Pendless is 480 percent faster with higher accuracy and reliability.

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Analysis

Execution Speed

Pendless completed tasks nearly **five times faster** than Comet.

This difference is material for real-world deployments, where large volumes of browser tasks must be processed daily. Faster execution reduces queue backlogs and amplifies cost savings across repetitive workflows.

Precision

Pendless achieved **97.2 percent precision**, outperforming Comet's 93.3 percent.

This indicates:

- fewer incorrect clicks
- fewer misidentified fields
- more consistent interpretation of instructions

Precision is especially critical in high-stakes workflows such as claims processing, medical intake, or legal form handling.

Recall

Pendless delivered **97.9 percent recall**, compared to Comet's 93.6 percent.

High recall correlates with superior end-to-end workflow completion, meaning the agent reliably finishes all required steps without omission. This is a key differentiator in automation, where incomplete workflows generate operational drag and human intervention.

Reliability and Stability

Comet demonstrated **6 general failures** across the 34 tasks.

Pendless recorded **zero failures**.

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This stability is crucial for production-grade automation. Each failure represents:

- lost time
- lost trust
- and potential data integrity issues

Pendless' clear lead here illustrates a more mature and predictable execution engine.

Technical Insights

Architectural Advantages Contributing to Pendless' Performance

While confidential implementation details are not disclosed, the following high-level factors contribute to Pendless' superior performance:

- **Lightweight DOM-aware execution engine** optimized specifically for browser tasks
- **Deterministic action planning** with higher alignment to real page structures
- **Reduced hallucination pathways** through targeted page-snapshot conditioning
- **Optimized agent-to-server cycle times** enabling faster iterative action steps
- **Resilient fallback logic** to prevent dead-ends or workflow abandonment

These architectural advantages compound to create an engine that is both faster *and* more accurate under identical conditions.

Conclusions

Pendless outperforms Perplexity Comet by a wide margin across all major automation metrics.

Speed:

480 percent faster execution provides a decisive operational advantage.

Accuracy:

Higher precision reduces the risk of incorrect actions.

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Completeness:

Higher recall ensures more reliable end-to-end workflow completion.

Stability:

Zero general errors demonstrate Pendless' production readiness.

These results position Pendless as a leading platform in browser-based automation and validate its strategic advantage heading into launch. With an upcoming engine optimization sprint already planned, further gains are expected.

Feel free to contact us: info@pendless.com.