



# 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.

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## 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.
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## 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.

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### 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.

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### 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.

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## 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.

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## 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.

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### 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.

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### 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.

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### 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.

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## 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.

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## 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.

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