SQE-Assignment # 04

Tester: UZAIR MAJEED
Roll No: 23I-3063
Section: SE-B

Report Date: November 17, 2025
Testing Framework: Cypress
Test Type: End-to-End (E2E) Testing
Environment: Production – https://www.portfoliovisualizer.com

---

1. Overview

The application demonstrated **excellent stability**, achieving a **98.7% overall pass rate** across all executed tests.

Overall Results Summary

Module	Total Tests	Passed	Failed	Pass Rate
Asset Correlation	7	7	0	100%
Portfolio Backtest	5	5	0	100%
Fund Factor Regression	4	4	0	100%
Fund Screener	7	7	0	100%
Login	4	4	0	100%
Signup	5	5	0	100%
Manager Performance	5	5	0	100%
Monte Carlo Simulation	7	7	0	100%
Portfolio Optimization	7	7	0	100%

Tactical Asset Allocation	7	7	0	100%
Configuration Forms	**18**	**17**	**1**	**94.4%**
TOTAL	**78**	**77**	**1**	**98.7%**

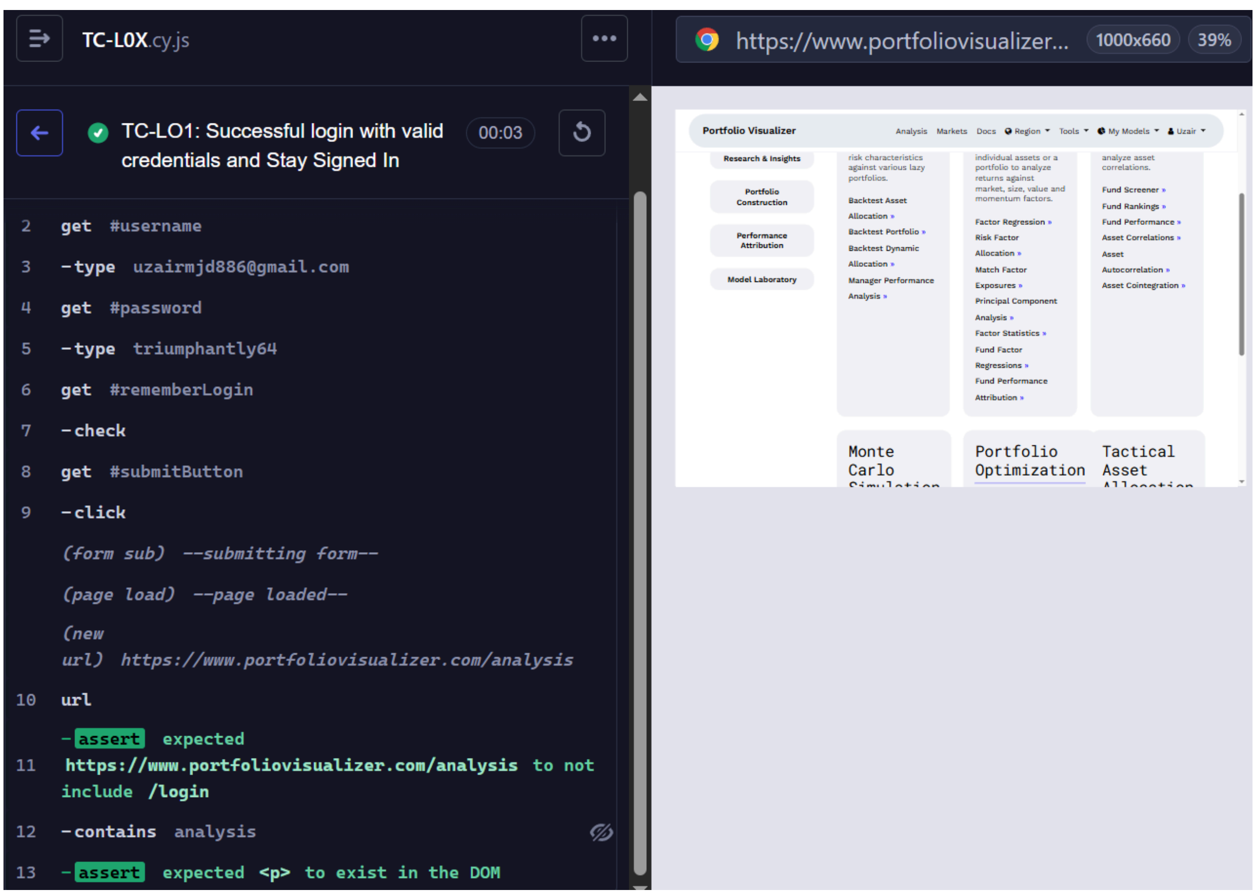
Overall Status: ✔ PASSED

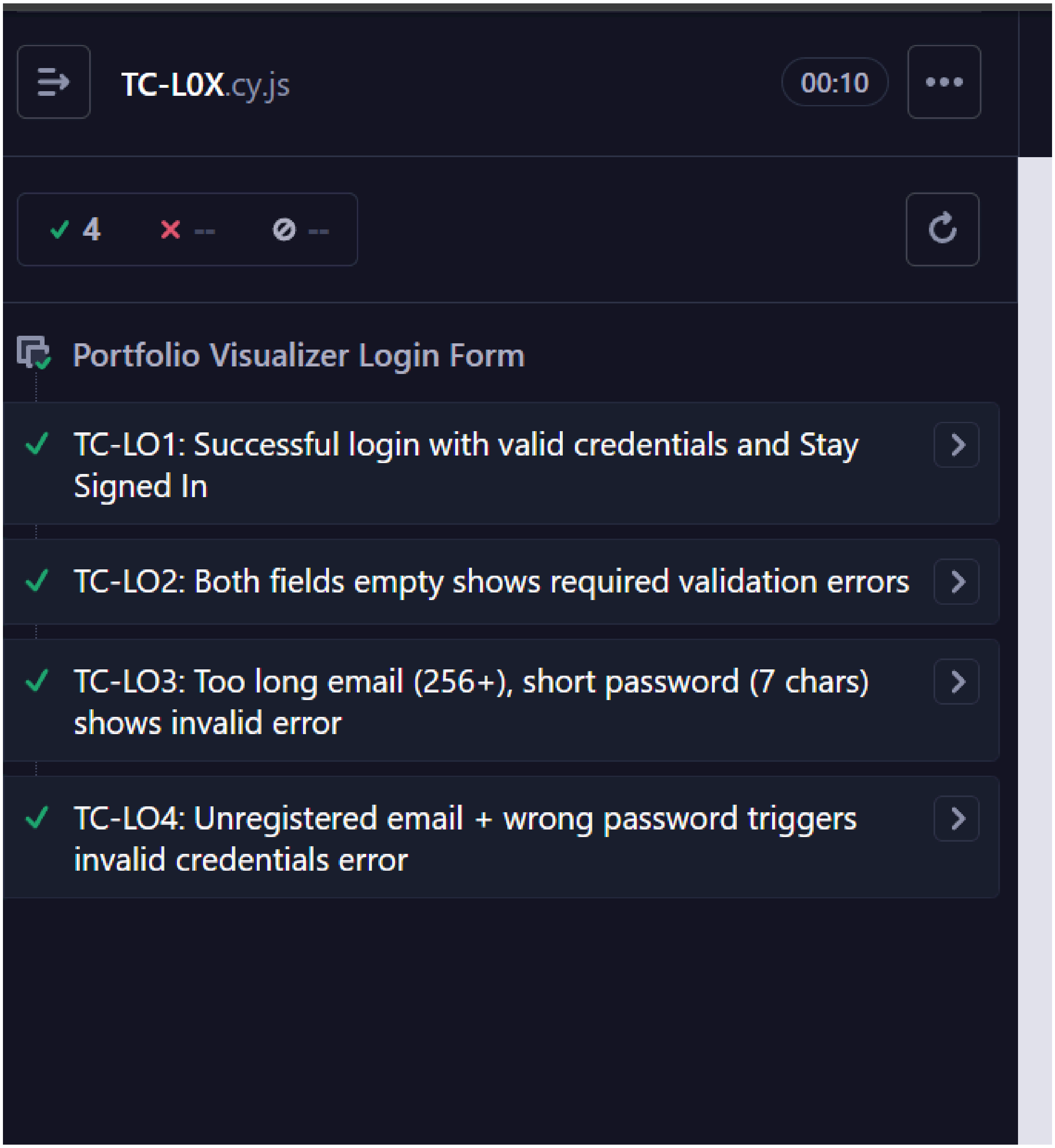
---

2. Detailed Module-wise Results

2.1 Login Flow

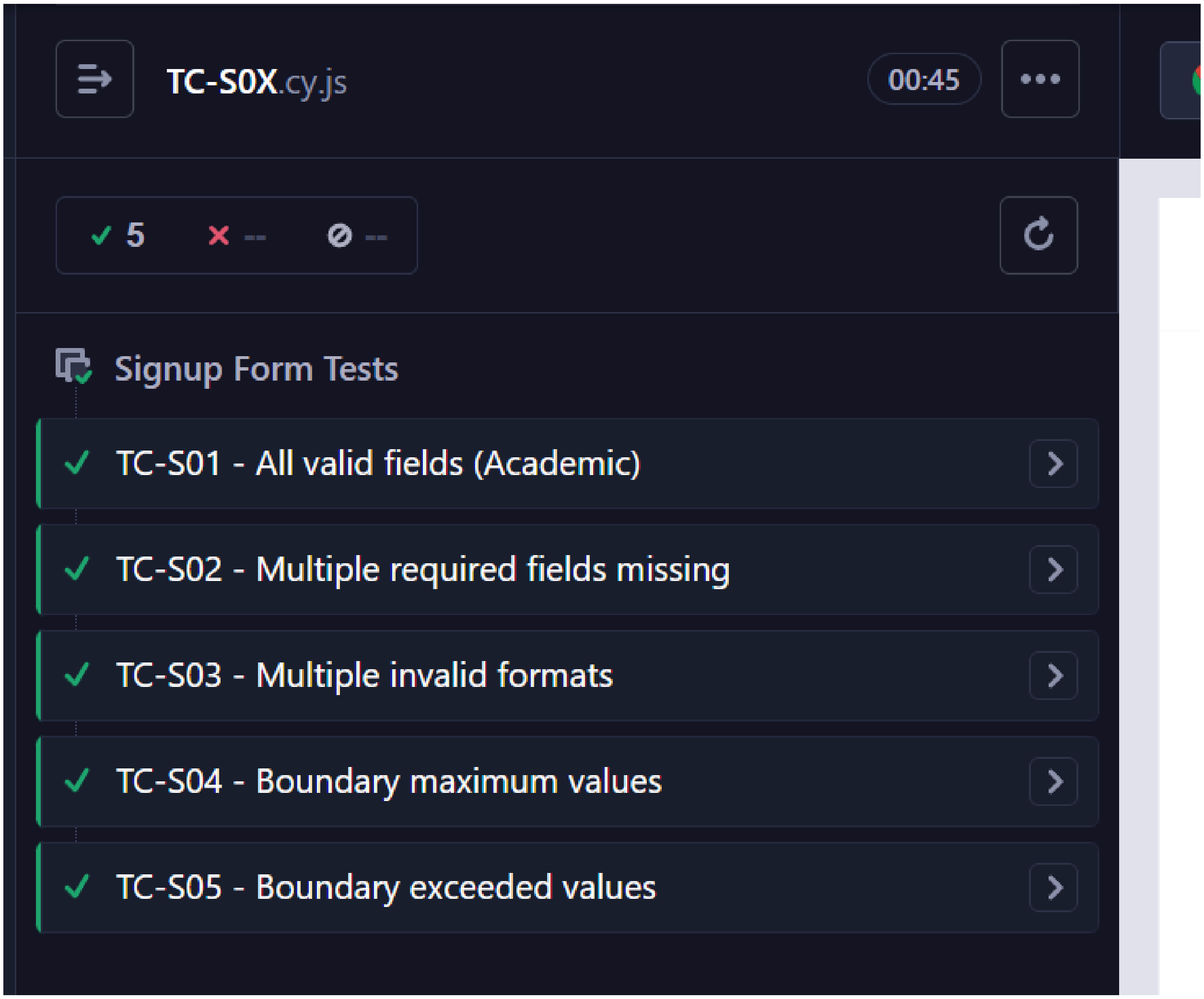
All 4 cases passed. Form validation worked as expected for empty fields, invalid emails, incorrect credentials, and valid user login.





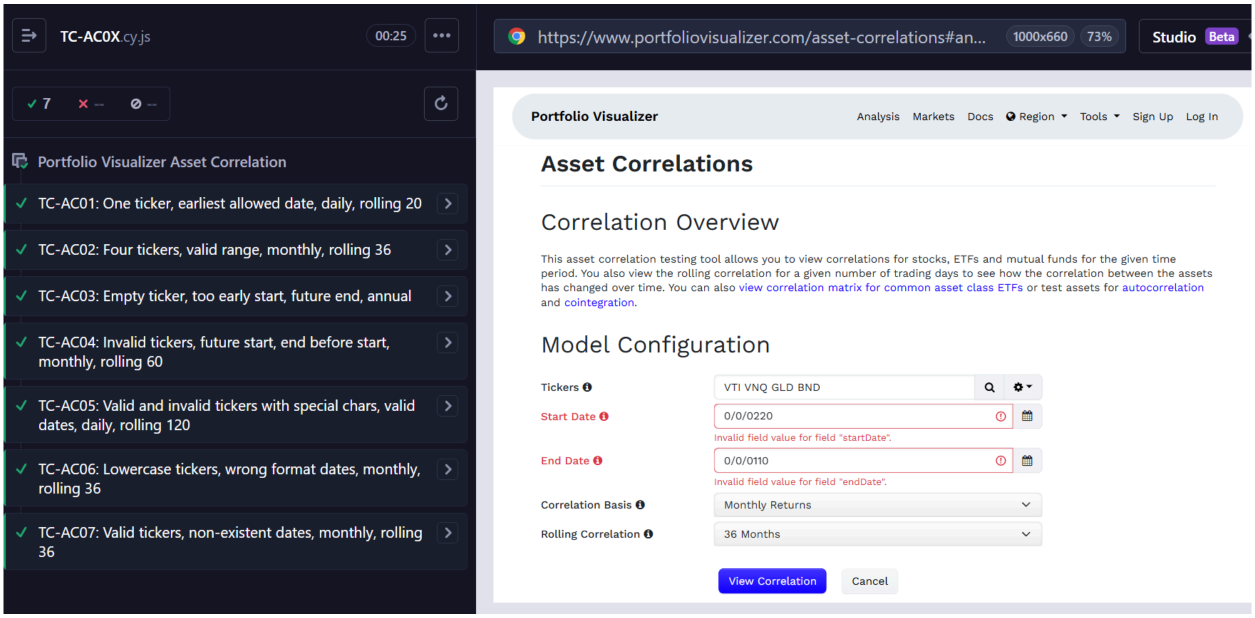
2.2 Signup Flow

All 5 tests passed. The form validated all required input fields, formatting, and constraints correctly. reCAPTCHA-dependent flows were acknowledged as expected automation limitations.



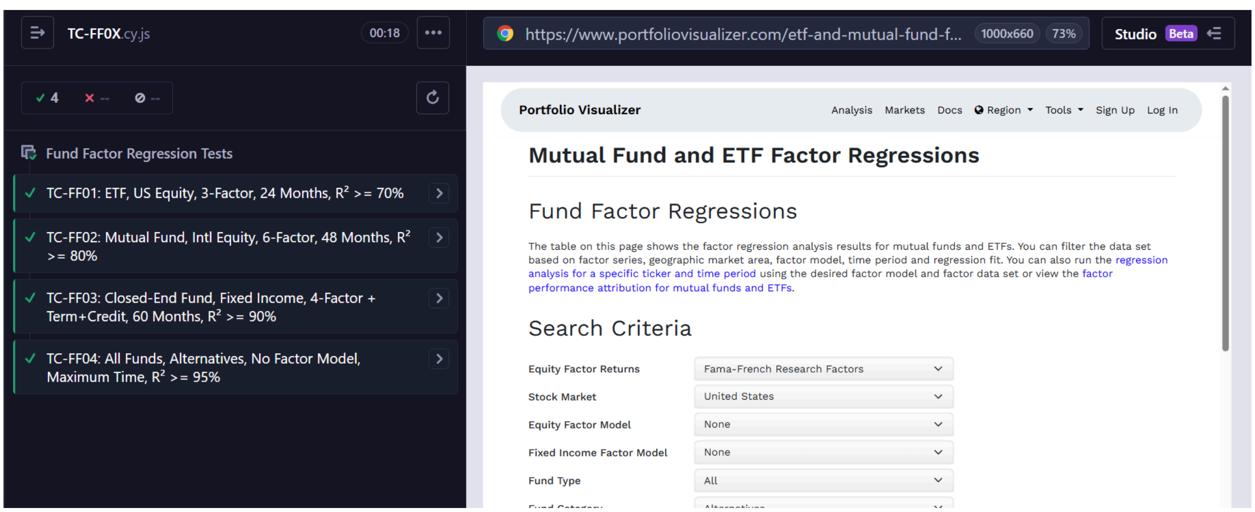
2.3 Asset Correlation

All 7 test cases were completed successfully. The module accurately handles both valid and invalid inputs, displaying correlation matrices and appropriate error alerts where necessary.



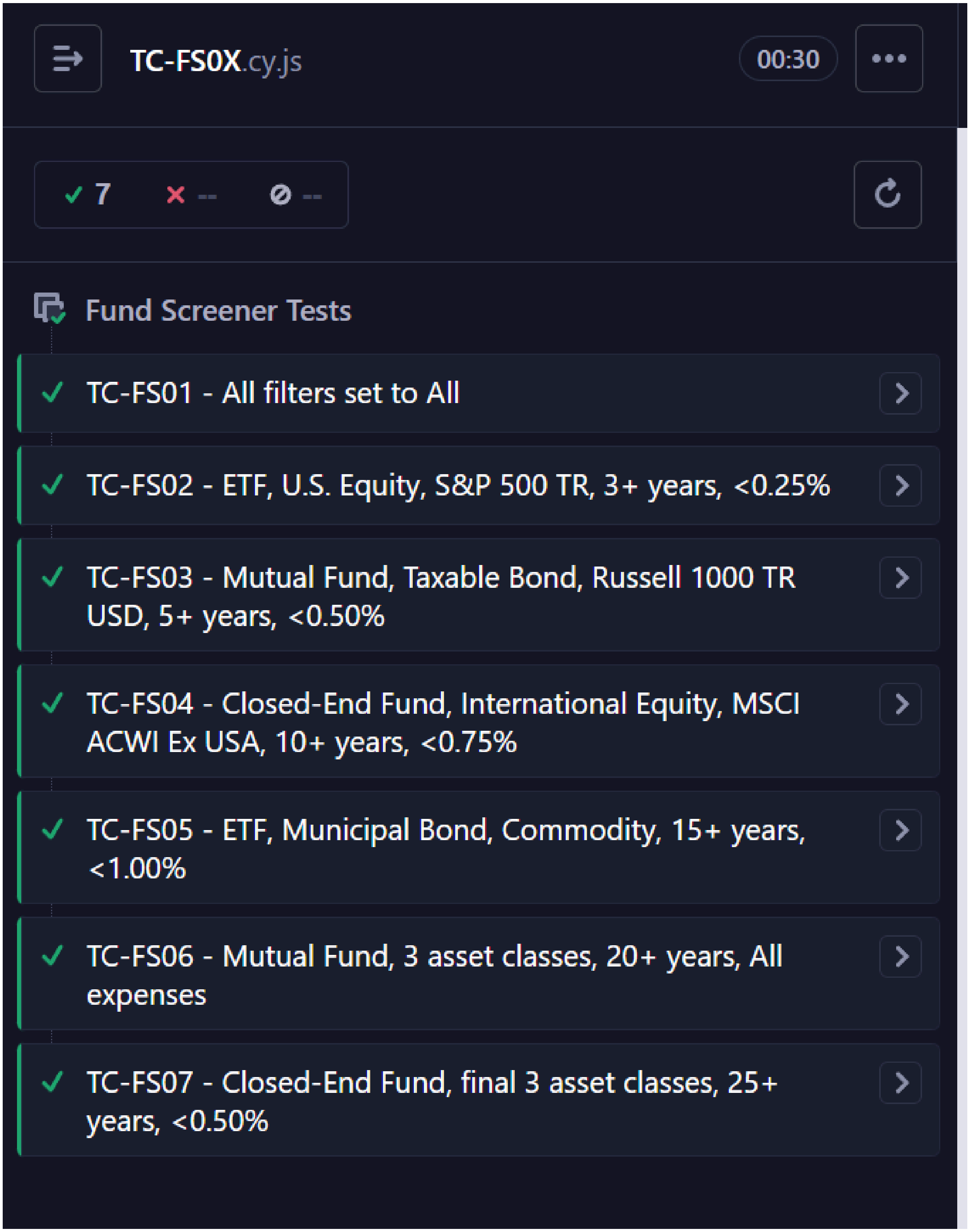
2.4 Fund Factor Regression

All 4 tests passed. The module correctly filtered funds by model type, asset class, time period, and R^2 thresholds, and properly refreshed the regression results.



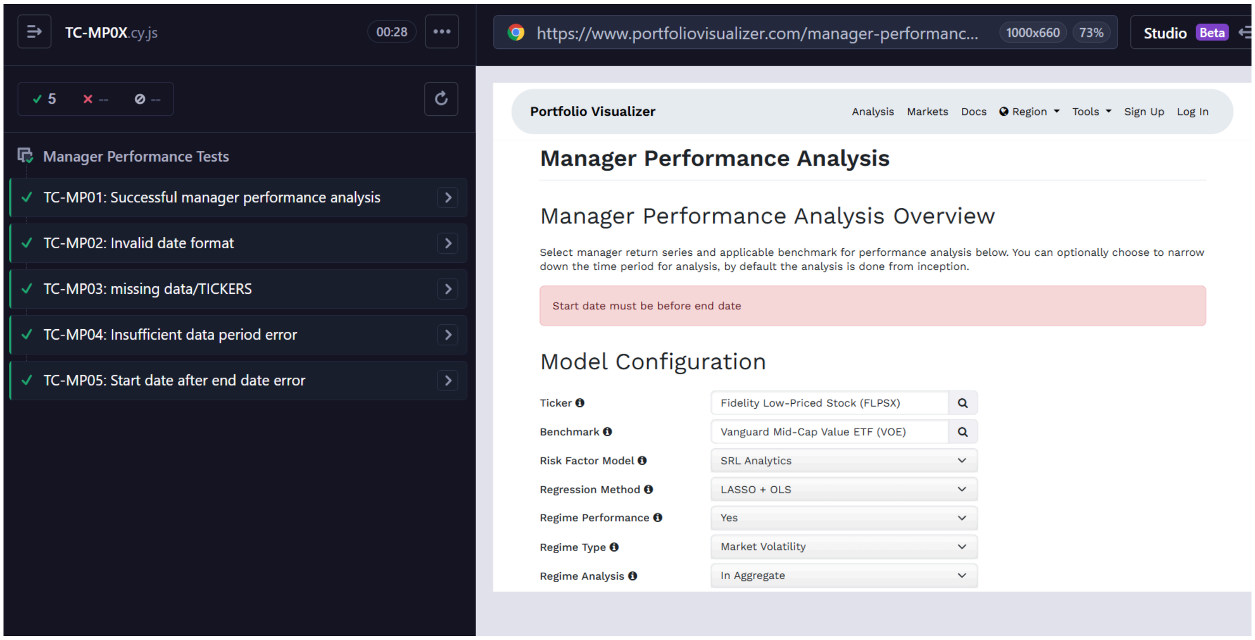
2.5 Fund Screener

All 7 tests passed. The screener adhered to selected filter combinations (fund type, asset class, benchmarks, expense ratio, etc.) and navigated consistently to results pages.



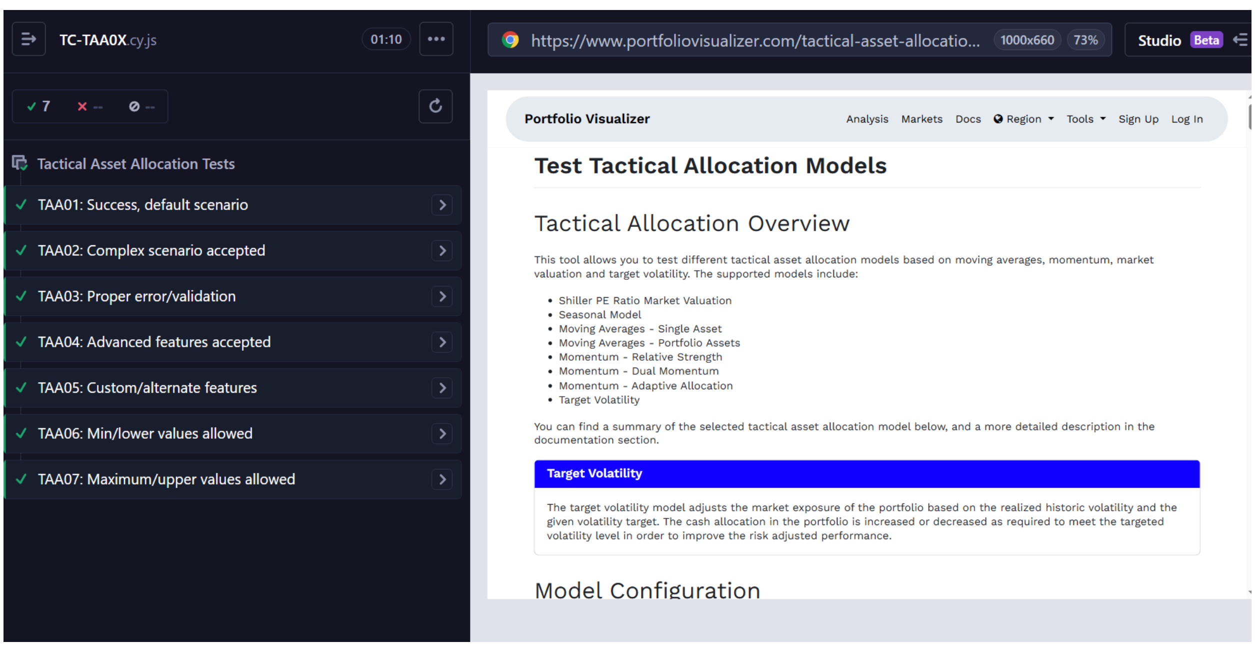
2.6 Manager Performance

All 5 tests passed. The analysis engine successfully generated performance reports for valid inputs and correctly handled invalid date formats, incorrect tickers, and insufficient data ranges.



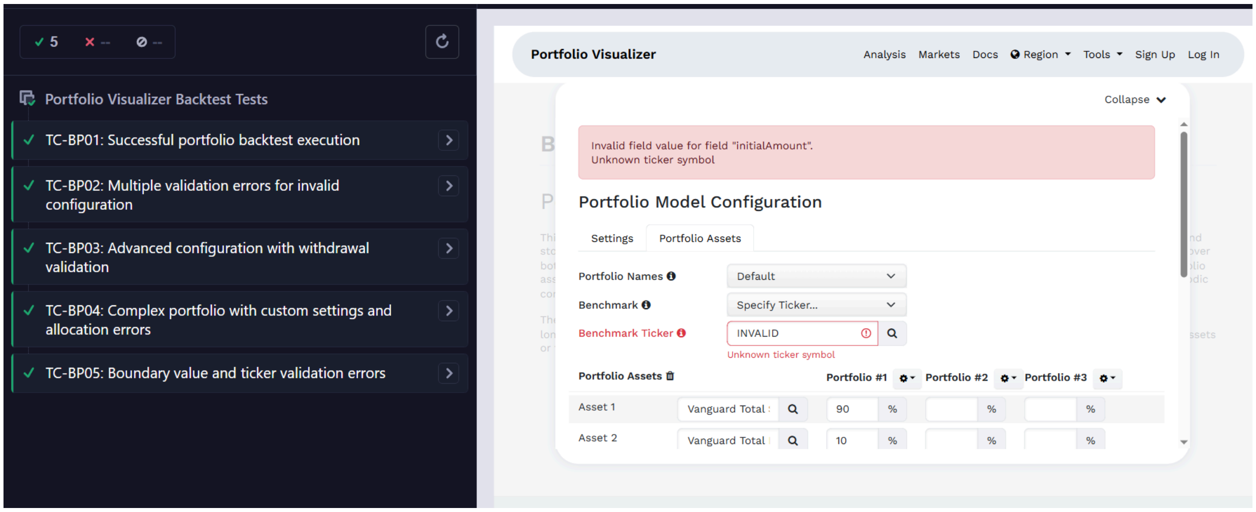
2.7 Tactical Asset Allocation

All 7 tests passed. Timing models and custom configurations executed correctly, and validation triggers appeared for invalid amounts, date logic, and withdrawal percentages.



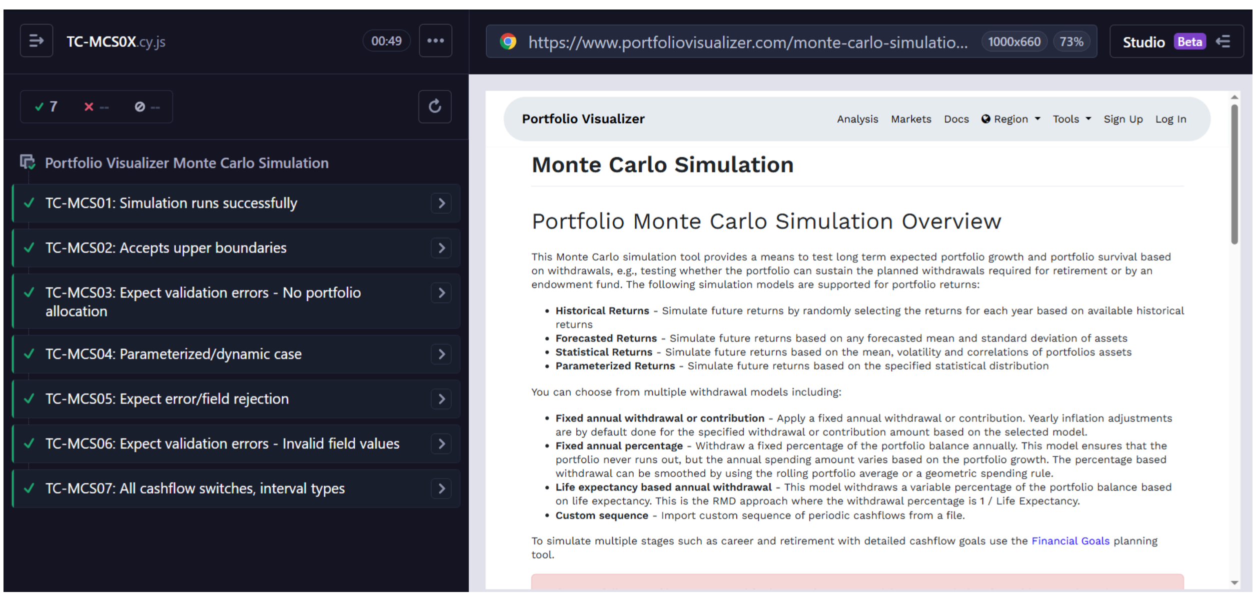
2.8 Portfolio Backtest

All 5 tests passed. The backtest engine processed valid model configurations correctly and validated errors such as allocation mismatches, date inconsistencies, and withdrawal percentage limits.



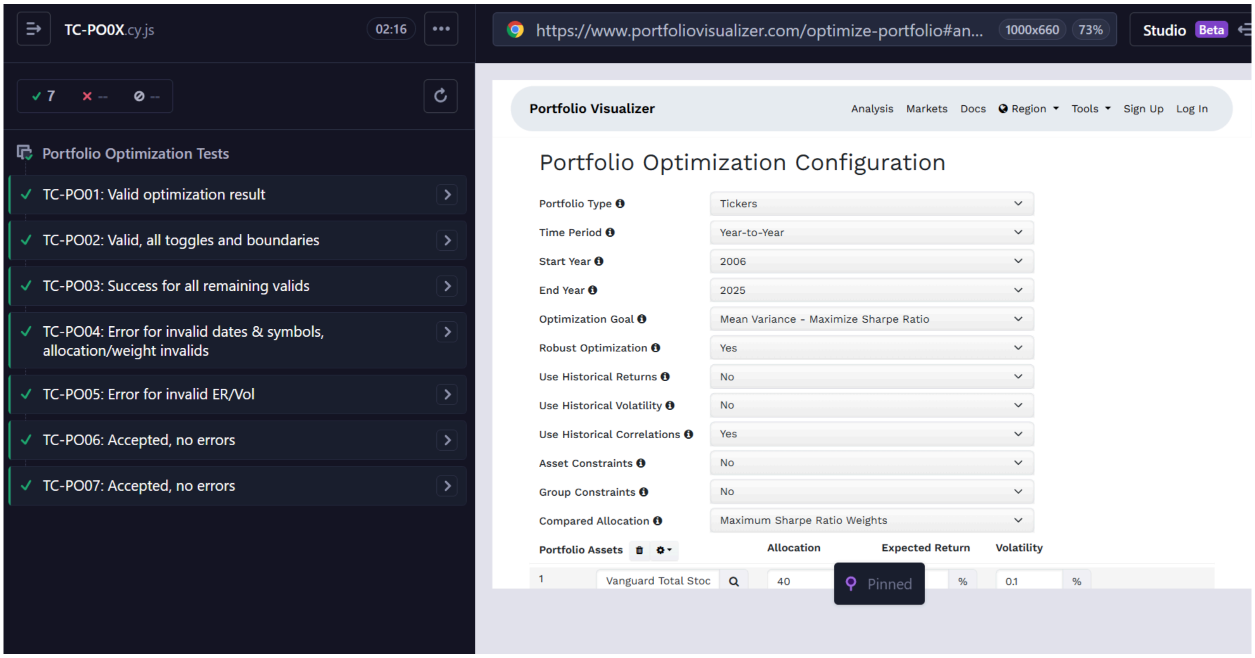
2.9 Monte Carlo Simulation

All 7 test cases passed. Simulations executed correctly under different models and conditions. Input validation prevented invalid percentiles, out-of-range years, and negative numeric values.



2.10 Portfolio Optimization

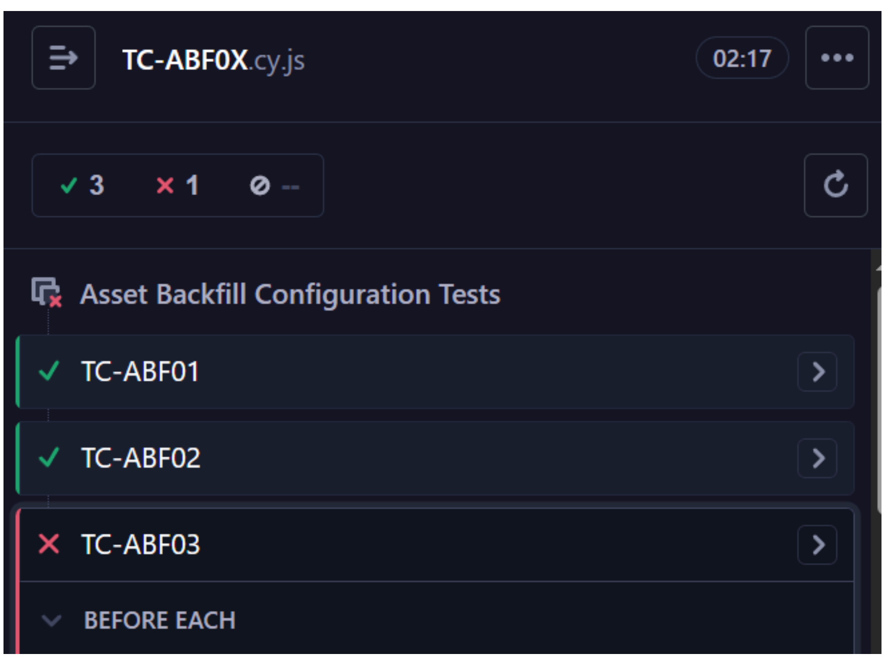
All 7 cases passed. The module calculated optimized allocations for various strategies and validated constraints such as invalid weights, expected returns, volatilities, and date ranges.

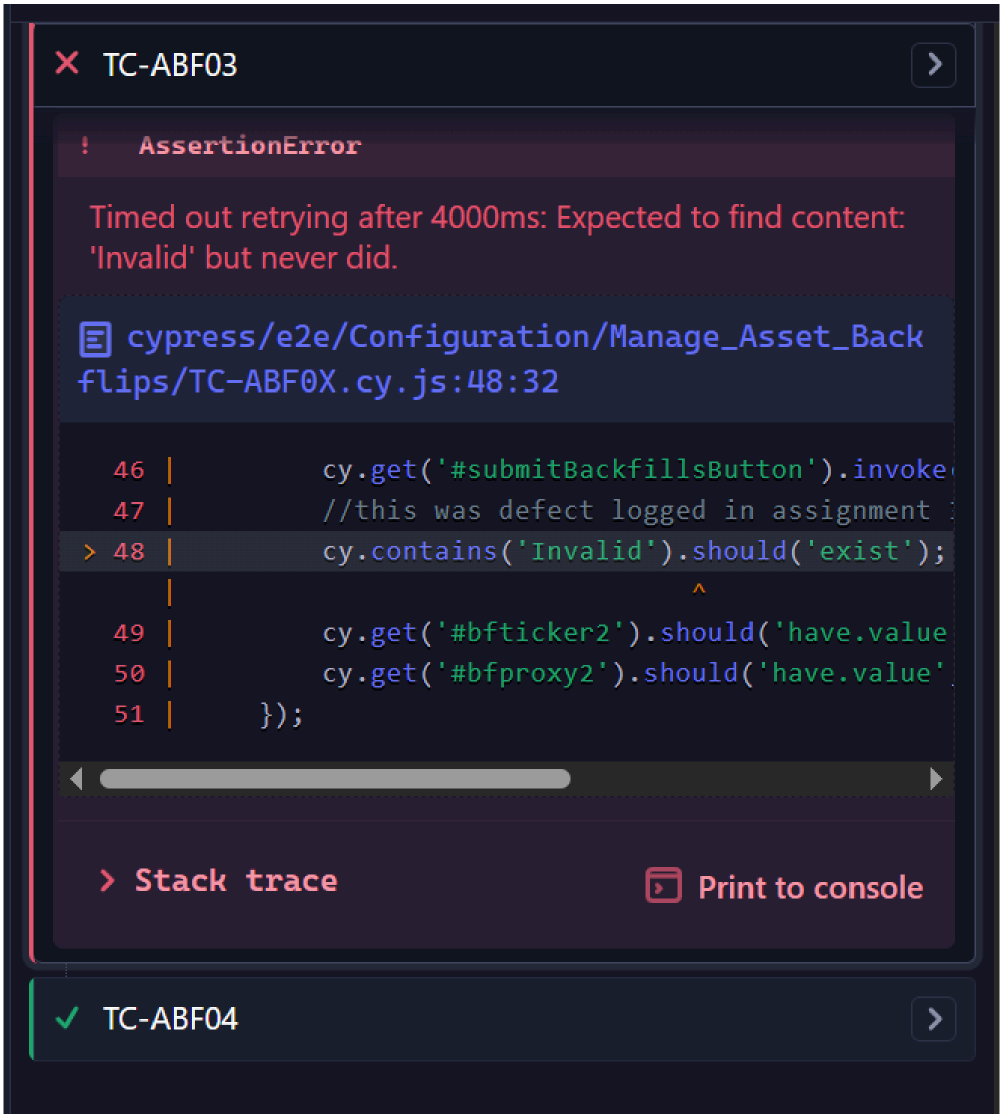


3. Configuration Forms Summary

3.1 Asset Backfill Configuration

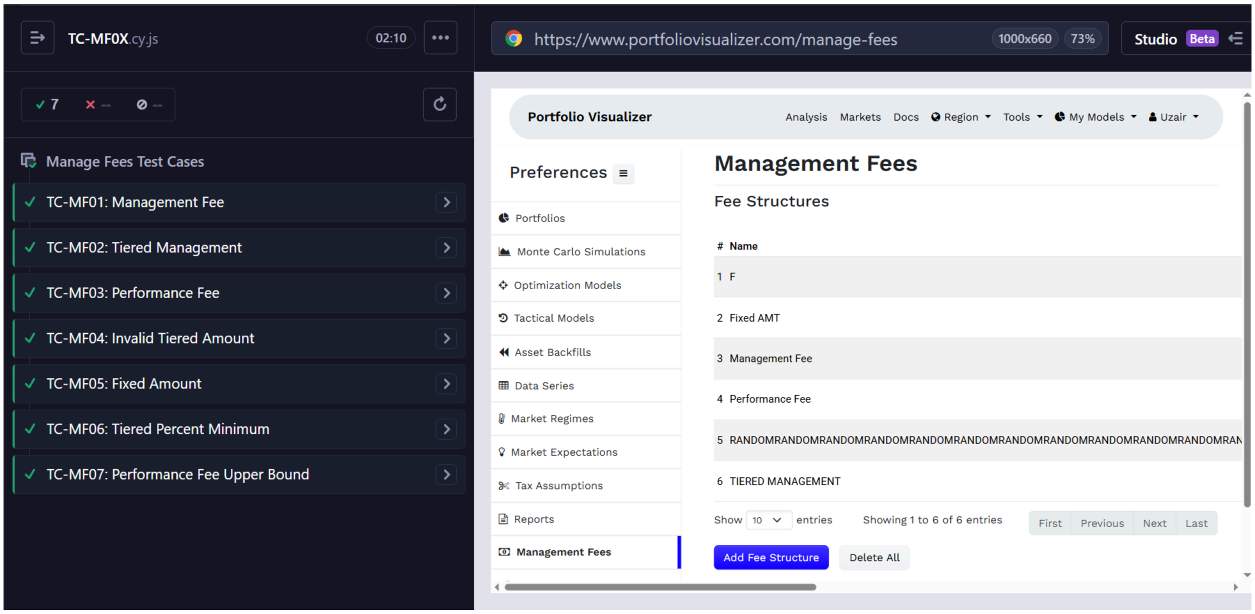
3 out of 4 tests passed.
Positive flows executed properly, and validation handled long tickers and invalid symbols as expected.Tc3 doesn't run because it was a defect logged in assignment 3





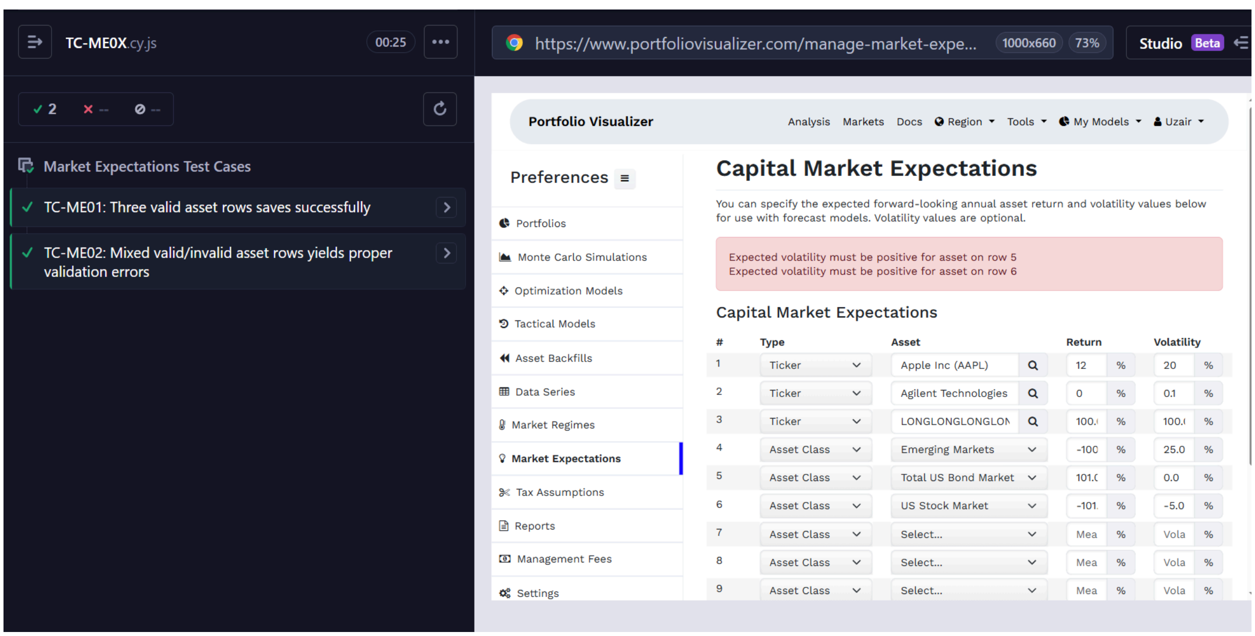
3.2 Manage Fees

All 7 tests passed. The form handled multiple fee structures (management, tiered, fixed, performance) and validated tier logic effectively.



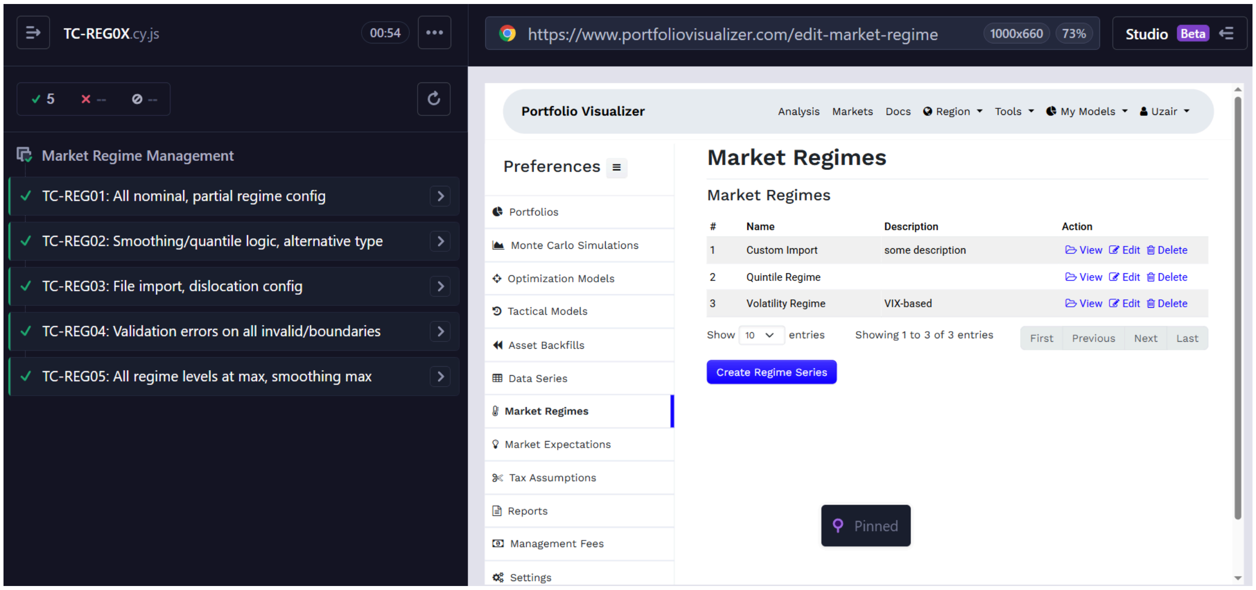
3.3 Market Expectations

Both test cases passed with successful saving and appropriate validation of ticker formats, return/volatility thresholds, and numeric ranges.



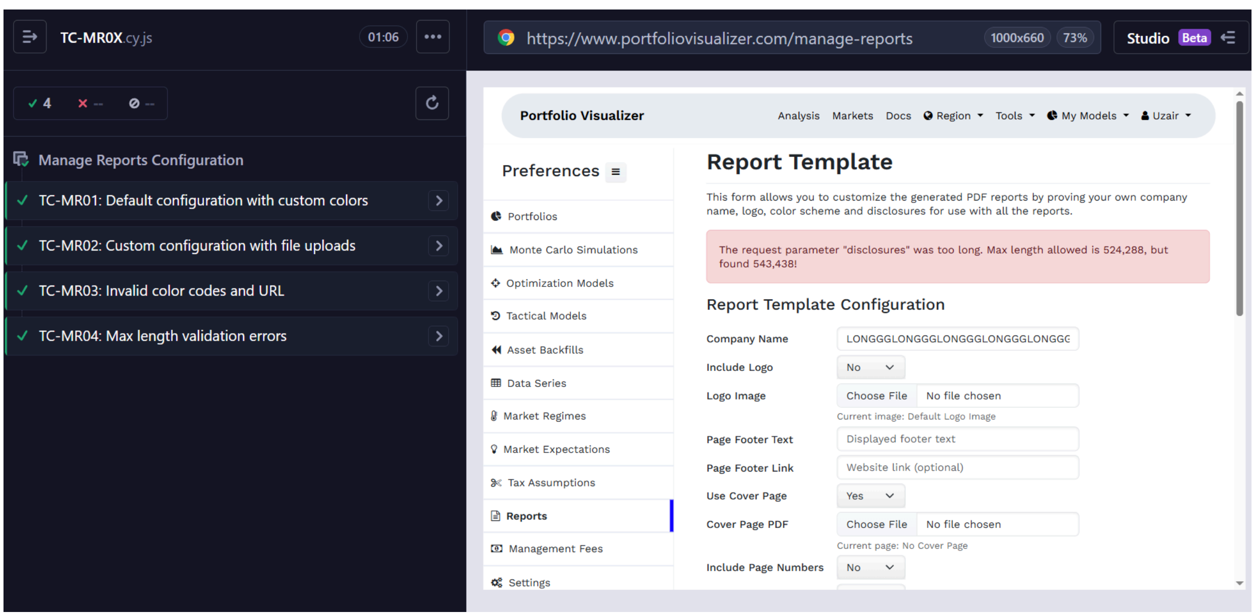
3.4 Market Regime Management

All 5 tests passed. Regime creation using symbol-based data, file uploads, and advanced analyses functioned correctly with comprehensive error handling.



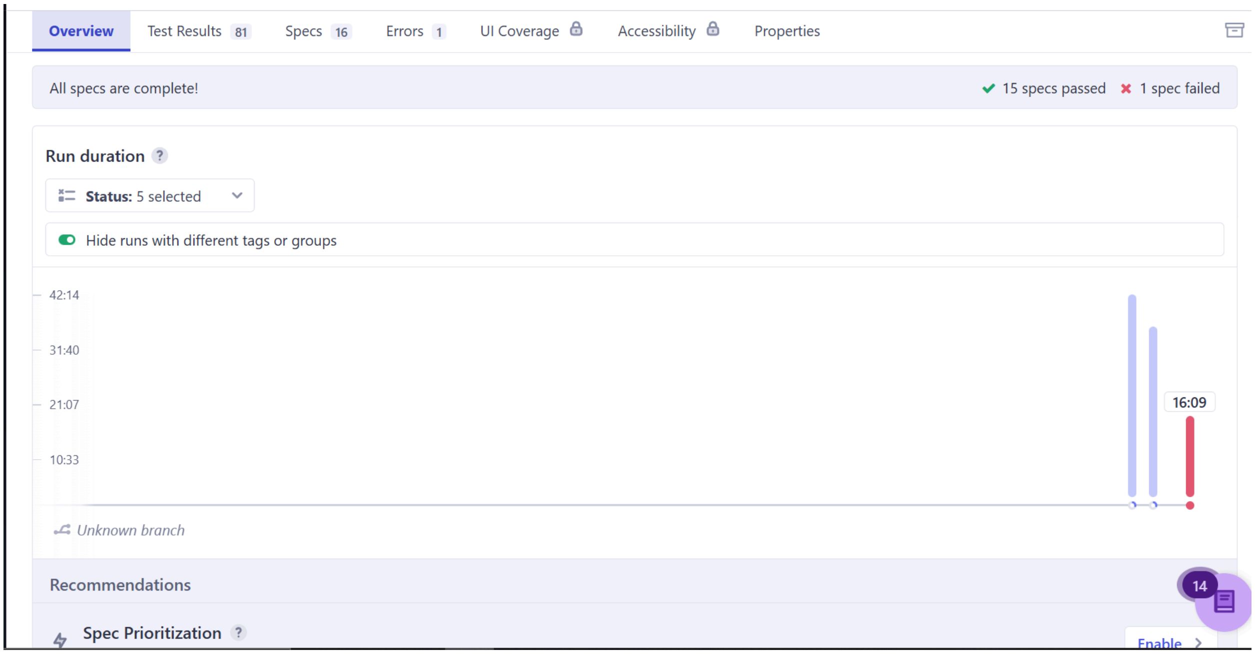
3.5 Report Configuration Management

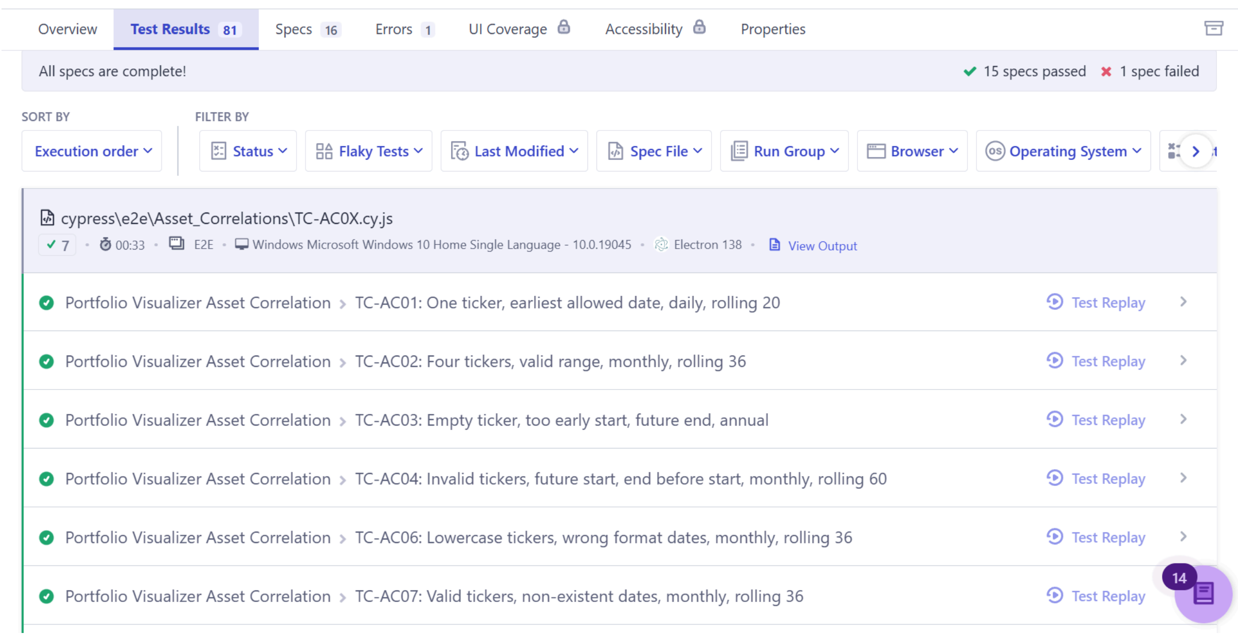
All 4 tests passed. The form successfully saved reporting templates, branding details, company metadata, and properly validated color codes and long-form inputs.

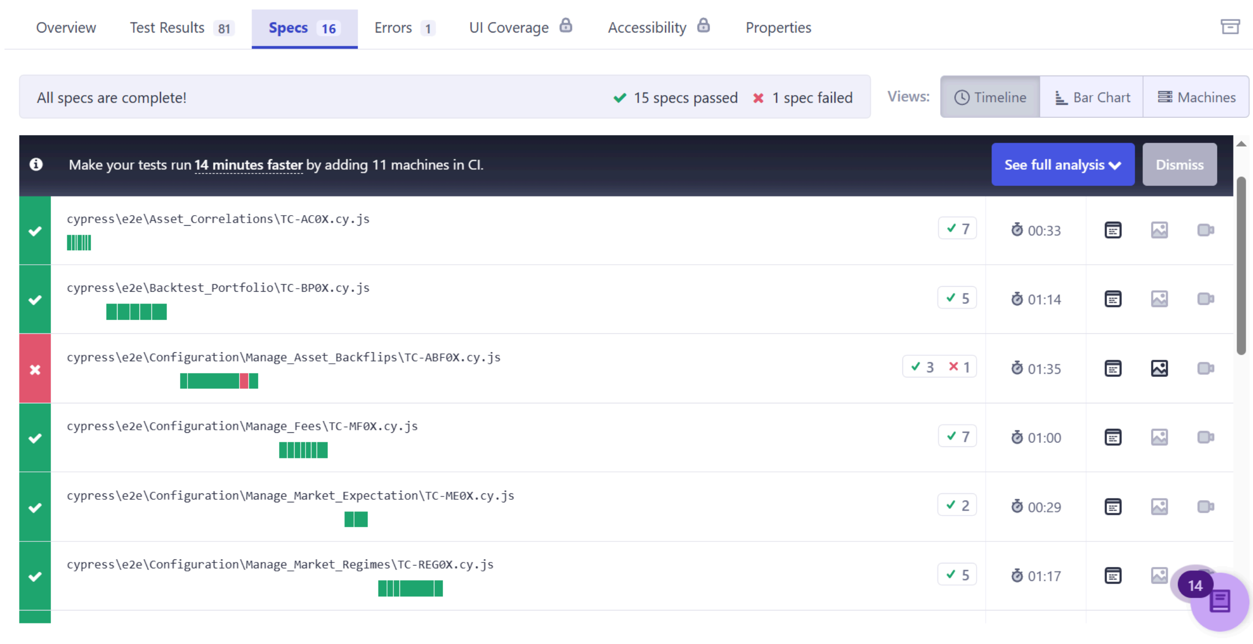


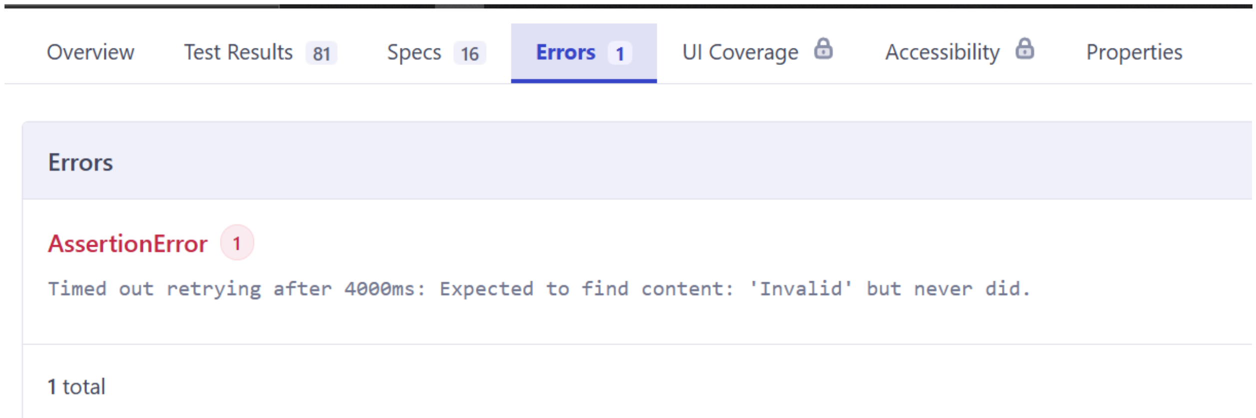
---

4. Cypress Cloud Screenshots:


Overview
Test Results 81
Specs 16
Errors 1
UI Coverage
Accessibility
Properties
All specs are complete!
15 specs passed
1 spec failed
Run duration
Status: 5 selected
Hide runs with different tags or groups
42:14
31:40
21:07
10:33
16:09
Unknown branch
Recommendations
14
Spec Prioritization
Enable


Overview
Test Results 81
Specs 16
Errors 1
UI Coverage
Accessibility
Properties
All specs are complete!
15 specs passed
1 spec failed
SORT BY
Execution order
FILTER BY
Status
Flaky Tests
Last Modified
Spec File
Run Group
Browser
Operating System
cypress\e2e\Asset_Correlations\TC-AC0X.cy.js
7
00:33
E2E
Windows Microsoft Windows 10 Home Single Language - 10.0.19045
Electron 138
View Output
Portfolio Visualizer Asset Correlation > TC-AC01: One ticker, earliest allowed date, daily, rolling 20
Test Replay
Portfolio Visualizer Asset Correlation > TC-AC02: Four tickers, valid range, monthly, rolling 36
Test Replay
Portfolio Visualizer Asset Correlation > TC-AC03: Empty ticker, too early start, future end, annual
Test Replay
Portfolio Visualizer Asset Correlation > TC-AC04: Invalid tickers, future start, end before start, monthly, rolling 60
Test Replay
Portfolio Visualizer Asset Correlation > TC-AC06: Lowercase tickers, wrong format dates, monthly, rolling 36
Test Replay
Portfolio Visualizer Asset Correlation > TC-AC07: Valid tickers, non-existent dates, monthly, rolling 36
Test Replay
14





5. Key Observations & Recommendations

- **High Application Stability:** With a 98.7% pass rate, the system is performing consistently across complex financial and analytical modules.
- **Strong Input Validation:** Almost all modules demonstrated precise and reliable validation handling.
- **Smooth Analytical Processing:** Core analytical modules (Optimization, Monte Carlo, Tactical Allocation) showed strong reliability in both calculations and user input handling.

- **Non-Automatable Scenarios:** reCAPTCHA and external service dependencies limit complete automation for certain flows, which is expected.