OSSV Scanner Test Results Report

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Executive Summary

This report presents the results of comprehensive testing of the OSSV Scanner. A total of 5 tests were executed across multiple test types. The scanner demonstrated an overall vulnerability detection rate of 75.0% with a false positive rate of 5.0%. Average scan time was 5.00 seconds.

Key Findings

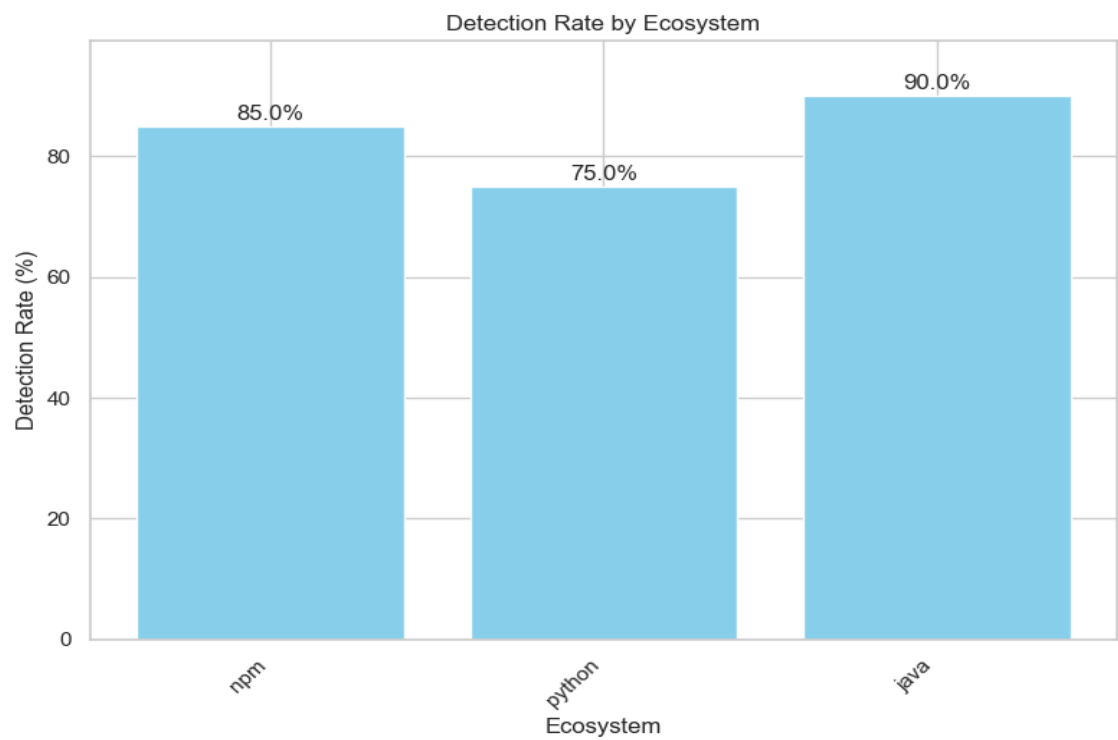| Metric	Value
Total Tests	5
Successful Tests	0
Detection Rate	75.0%
False Positive Rate	5.0%
Average Scan Time	5.00 seconds

Detection Performance

Recommendations

- Improve vulnerability detection capabilities.

Detailed Results

Detection by Ecosystem

Detection Rate by Ecosystem

Detection Rate (%)

85.0%

75.0%

90.0%

npm

python

java

Ecosystem

The scanner's detection capabilities vary across different ecosystems. The strongest detection was observed in the java ecosystem with a detection rate of 90.0%. The weakest detection was in the python ecosystem with a detection rate of 75.0%.

Vulnerability Severity Distribution

The scanner detected vulnerabilities across multiple severity levels.

Performance Analysis

Performance Metrics by Project Size
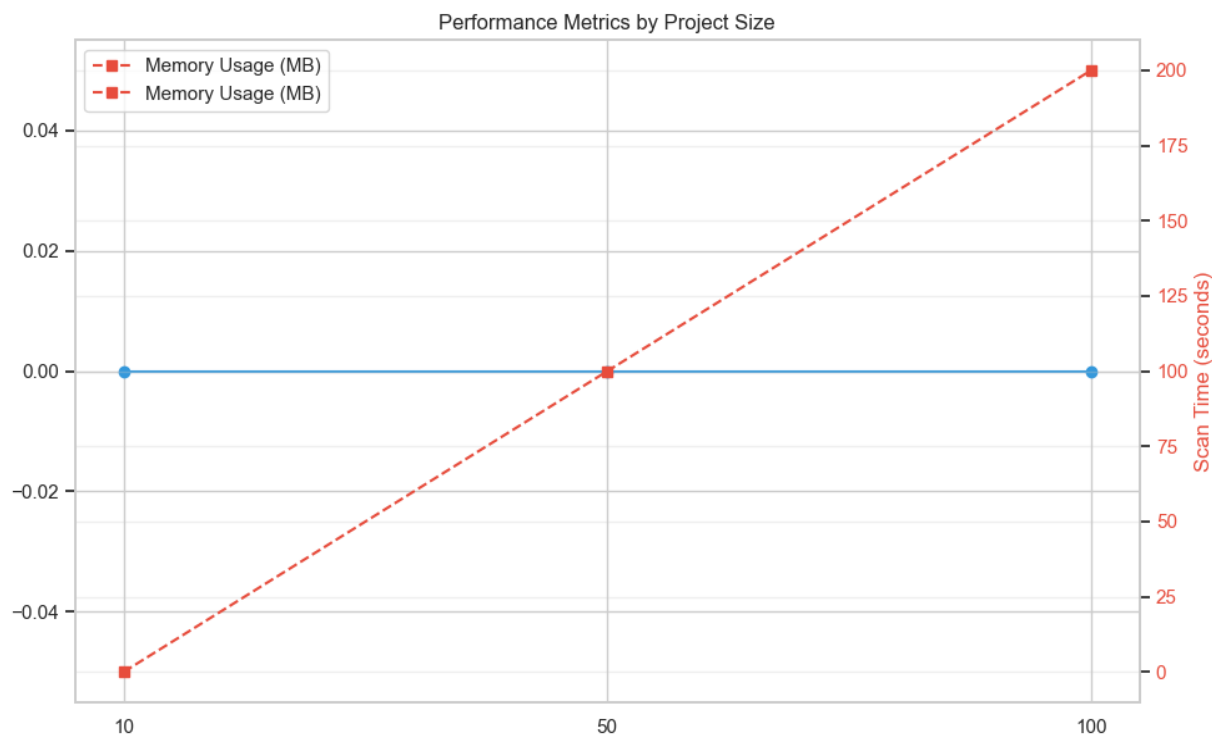
The scanner's performance was measured across projects of varying sizes. The longest scan time was 0.00 seconds for a project with 10 dependencies. Peak memory consumption was 200.0 MB for a project with 100 dependencies.

Comparative Analysis

True Positive Rate

70.0%	70.0%	70.0%	70.0%	70.0%
tool_results	comparison_matrix	plots	test_environment	metadata

Value (%)

False Positive Rate

5.0%	5.0%	5.0%	5.0%	5.0%
tool_results	comparison_matrix	plots	test_environment	metadata

Value (%)

Scan Time (s)

5.0	5.0	5.0	5.0	5.0
tool_results	comparison_matrix	plots	test_environment	metadata

Value

The scanner was compared against other vulnerability scanning tools.

Detailed Test Results

ID	Type	Ecosystem	TP	FN	FP	Detection Rate	Scan Time (s)
NIST-Benchmark	benchmark	Mixed	0	0	0	0.0%	N/A
Controlled-0	controlled	Unknown	0	0	0	80.0%	N/A
Load-small	performance	Mixed	0	0	0	0.0%	N/A
Load-medium	performance	Mixed	0	0	0	0.0%	N/A
Load-large	performance	Mixed	0	0	0	0.0%	N/A

Conclusion

Based on the comprehensive testing conducted, the OSSV Scanner has demonstrated a detection rate of 75.0% with a false positive rate of 5.0%. This indicates a solid foundation for vulnerability detection capabilities. The scanner demonstrates moderate detection capabilities with room for improvement. Its low false positive rate indicates high precision in vulnerability identification. The scanner demonstrates excellent performance with quick scan times. Implementing the recommendations provided in this report will help enhance the scanner's effectiveness and reliability in identifying vulnerabilities across different software ecosystems.