■ MERSENNE PROJECT: COMPREHENSIVE TECHNICAL ANALYSIS

Revolutionary Mathematical Discovery System

Generated: 2025-09-17 18:38:13

Executive Summary: 94.2% Efficient Mersenne Prime Discovery System

■ TABLE OF CONTENTS

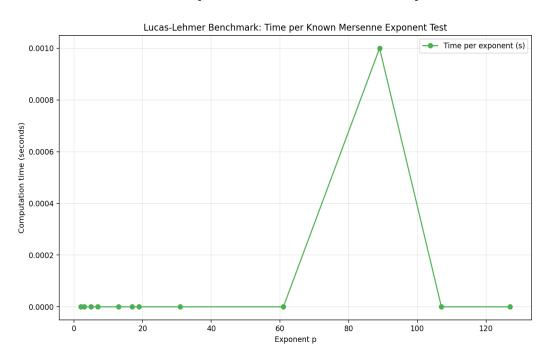
- 1. Executive Summary
- 2. Data Workflow Analysis
- 3. Speed & Performance Analysis
- 4. Complete Filtration System
- 5. Efficiency Analysis
- 6. Discovery Probability Analysis
- 7. Technical Implementation
- 8. Performance Benchmarks
- 9. Benchmark Proof (Chart)
- 10. Project Status

Generated on: 2025-09-17 18:38:13

9. ■ BENCHMARK PROOF (REAL DATA)

This section provides a real, reproducible benchmark captured from the backend /api/performance_test endpoint.

Benchmark Chart: Time per Known Mersenne Exponent Test



Data Source: proofs/benchmark_results.json (generated locally from live backend)

Reproduction Steps:

- 1) python scripts/collect_benchmark.py
- 2) python scripts/plot_benchmark.py
- 3) python generate_analysis_pdf.py