98 symbols glossary

ORCID: 0000-0000-0000-0000
Email: author@example.com

November 03, 2025

Contents

1 API Symbols Glossary

This glossary is auto-generated from the public API in `src/` by `repo_utilities/generate_glossary.py`.

Module	Name	Kind	Summary
`build_verifier`	`BuildVerificationResult`	class	Container for build verification results.
`build_verifier`	`calculate_file_hash`	function	Calculate hash of a file for integrity verification.
`build_verifier`	`create_build_validation_report`	function	Create a comprehensive build validation report.
`build_verifier`	`create_build_verification_script`	function	Create a comprehensive build verification script.
`build_verifier`	`create_comprehensive_build_report`	function	Create a comprehensive build report combining all verification results.
`build_verifier`	`create_integrity_manifest`	function	Create an integrity manifest for build verification.
`build_verifier`	`load_integrity_manifest`	function	Load integrity manifest from file.
`build_verifier`	`run_build_command`	function	Run a build command and capture output.
`build_verifier`	`save_integrity_manifest`	function	Save integrity manifest to file.

Module	Name	Kind	Summary
build_verifier	validate_build_configuration	function	Validate build configuration and settings.
build_verifier	validate_build_process	function	Validate that a build script is properly structured.
build_verifier	verify_build_artifacts	function	Verify that expected build artifacts are present and correct.
build_verifier	verify_build_environment	function	Verify that the build environment is properly configured.
build_verifier	verify_build_integrity_against_baseline	function	Verify build integrity against a baseline.
build_verifier	verify_build_reproducibility	function	Verify build reproducibility by running build multiple times.
build_verifier	verify_dependency_consistency	function	Verify consistency between dependency files.
build_verifier	verify_integrity_against_manifest	function	Verify integrity between two manifests.
build_verifier	verify_output_directory_structure	function	Verify that output directory has expected structure.
example	add_numbers	function	Add two numbers together.
example	calculate_average	function	Calculate the average of a list of numbers.
example	find_maximum	function	Find the maximum value in a list of numbers.
example	find_minimum	function	Find the minimum value in a list of numbers.
example	is_even	function	Check if a number is even.
example	is_odd	function	Check if a number is odd.
example	multiply_numbers	function	Multiply two numbers together.

Module	Name	Kind	Summary
`glossary_gen`	`ApiEntry`	class	Represents a public API entry from source code.
`glossary_gen`	`build_api_index`	function	Scan `src_dir` and collect public functions/classes with summaries.
`glossary_gen`	`generate_markdown_table`	function	Generate a Markdown table from API entries.
`glossary_gen`	`inject_between_markers`	function	Replace content between begin_marker and end_marker (inclusive markers preserved).
`integrity`	`IntegrityReport`	class	Container for integrity verification results.
`integrity`	`calculate_file_hash`	function	Calculate hash of a file for integrity verification.
`integrity`	`check_file_permissions`	function	Check file permissions and accessibility.
`integrity`	`create_integrity_manifest`	function	Create an integrity manifest for all output files.
`integrity`	`generate_integrity_report`	function	Generate a human-readable integrity report.
`integrity`	`load_integrity_manifest`	function	Load integrity manifest from file.
`integrity`	`save_integrity_manifest`	function	Save integrity manifest to file.
`integrity`	`validate_build_artifacts`	function	Validate that all expected build artifacts are present and correct.
`integrity`	`verify_academic_standards`	function	Verify compliance with academic writing standards.
`integrity`	`verify_cross_references`	function	Verify cross-reference integrity in markdown files.

Module	Name	Kind	Summary
`integrity`	`verify_data_consistency`	function	Verify data file consistency and integrity.
`integrity`	`verify_file_integrity`	function	Verify file integrity using hash comparison.
`integrity`	`verify_integrity_against_manifest`	function	Verify current integrity against a saved manifest.
`integrity`	`verify_output_completeness`	function	Verify that all expected outputs are present and complete.
`integrity`	`verify_output_integrity`	function	Perform comprehensive integrity verification of all outputs.
`pdf_validator`	`PDFValidationError`	class	Raised when PDF validation encounters an error.
`pdf_validator`	`extract_first_n_words`	function	Extract the first N words from text, preserving punctuation.
`pdf_validator`	`extract_text_from_pdf`	function	Extract all text content from a PDF file.
`pdf_validator`	`scan_for_issues`	function	Scan extracted text for common rendering issues.
`pdf_validator`	`validate_pdf_rendering`	function	Perform comprehensive validation of PDF rendering.
`publishing`	`CitationStyle`	class	Container for citation style configuration.
`publishing`	`PublicationMetadata`	class	Container for publication metadata.
`publishing`	`calculate_complexity_score`	function	Calculate a complexity score for the publication.
`publishing`	`calculate_file_hash`	function	Calculate hash of a file for integrity verification.
`publishing`	`create_academic_profile_data`	function	Create academic profile data for ORCID, ResearchGate, etc.

Module	Name	Kind	Summary
`publishing`	`create_publication_announcement`	function	Create a publication announcement for social media and blogs.
`publishing`	`create_publication_package`	function	Create a publication package with all necessary files.
`publishing`	`create_repository_metadata`	function	Create repository metadata for GitHub repository.
`publishing`	`create_submission_checklist`	function	Create a submission checklist for academic conferences/journals.
`publishing`	`extract_citations_from_markdown`	function	Extract all citations from markdown files.
`publishing`	`extract_publication_metadata`	function	Extract publication metadata from markdown files.
`publishing`	`format_authors_apa`	function	Format authors for APA style.
`publishing`	`format_authors_mla`	function	Format authors for MLA style.
`publishing`	`generate_citation_apa`	function	Generate APA citation format.
`publishing`	`generate_citation_bibtex`	function	Generate BibTeX citation format.
`publishing`	`generate_citation_mla`	function	Generate MLA citation format.
`publishing`	`generate_citations_markdown`	function	Generate markdown section with all citation formats.
`publishing`	`generate_doi_badge`	function	Generate DOI badge markdown.
`publishing`	`generate_publication_metrics`	function	Generate publication metrics for reporting.
`publishing`	`generate_publication_summary`	function	Generate a publication summary for repository README.

Module	Name	Kind	Summary
`publishing`	`validate_doi`	function	Validate DOI format and checksum.
`publishing`	`validate_publication_readiness`	function	Validate that the project is ready for publication.
`quality_checker`	`QualityMetrics`	class	Container for document quality metrics.
`quality_checker`	`analyze_academic_standards`	function	Analyze compliance with academic writing standards.
`quality_checker`	`analyze_document_metrics`	function	Analyze various document metrics for quality assessment.
`quality_checker`	`analyze_document_quality`	function	Perform comprehensive quality analysis of a research document.
`quality_checker`	`analyze_formatting_quality`	function	Analyze document formatting quality.
`quality_checker`	`analyze_readability`	function	Analyze text readability using multiple metrics.
`quality_checker`	`analyze_structural_integrity`	function	Analyze document structural integrity.
`quality_checker`	`calculate_overall_quality_score`	function	Calculate overall quality score from individual metrics.
`quality_checker`	`check_document_accessibility`	function	Check document accessibility features.
`quality_checker`	`count_syllables`	function	Count syllables in text using a simple heuristic.
`quality_checker`	`count_syllables_word`	function	Count syllables in a single word.
`quality_checker`	`extract_text_from_pdf_detailed`	function	Extract detailed text information from PDF for quality analysis.
`quality_checker`	`generate_quality_report`	function	Generate a human-readable quality report.

Module	Name	Kind	Summary
quality_checker	validate_research_document_completeness	function	Validate that a research document contains all expected sections.
reproducibility	ReproducibilityReport	class	Container for reproducibility analysis results.
reproducibility	calculate_directory_hash	function	Calculate hash of all files in a directory.
reproducibility	calculate_file_hash	function	Calculate hash of a file for integrity verification.
reproducibility	capture_dependency_state	function	Capture dependency information for reproducibility.
reproducibility	capture_environment_state	function	Capture the current environment state for reproducibility.
reproducibility	compare_snapshots	function	Compare two version snapshots for changes.
reproducibility	create_reproducible_environment	function	Create environment configuration for reproducible builds.
reproducibility	create_reproducible_script_template	function	Create a template for reproducible research scripts.
reproducibility	create_version_snapshot	function	Create a version snapshot of the current build for future comparison.
reproducibility	generate_build_manifest	function	Generate a comprehensive build manifest for reproducibility.
reproducibility	generate_reproducibility_report	function	Generate comprehensive reproducibility report.
reproducibility	load_reproducibility_report	function	Load reproducibility report from file.
reproducibility	save_build_manifest	function	Save build manifest to file.

Module	Name	Kind	Summary
reproducibility	save_reproducibility_report	function	Save reproducibility report to file.
reproducibility	validate_experiment_reproducibility	function	Validate that experiment results are reproducible within tolerance.
reproducibility	verify_build_integrity	function	Verify build integrity against a saved manifest.
reproducibility	verify_reproducibility	function	Verify reproducibility by comparing current and previous reports.
scientific_dev	BenchmarkResult	class	Container for benchmark results.
scientific_dev	StabilityTest	class	Container for numerical stability test results.
scientific_dev	benchmark_function	function	Benchmark function performance across multiple inputs.
scientific_dev	check_numerical_stability	function	Check numerical stability of a function across a range of inputs.
scientific_dev	check_research_compliance	function	Check function compliance with research software standards.
scientific_dev	create_scientific_module_template	function	Create a template for a new scientific module.
scientific_dev	create_scientific_test_suite	function	Create a comprehensive test suite for a scientific module.
scientific_dev	create_scientific_workflow_template	function	Create a template for scientific research workflows.
scientific_dev	generate_api_documentation	function	Generate comprehensive API documentation for a scientific module.
scientific_dev	generate_performance_report	function	Generate a performance analysis report.

Module	Name	Kind	Summary
`scientific_dev`	`generate_scientific_documentation`	function	Generate scientific documentation for a function.
`scientific_dev`	`validate_scientific_best_practices`	function	Validate that a module follows scientific computing best practices.
`scientific_dev`	`validate_scientific_implementation`	function	Validate scientific implementation against known test cases.