

Project Documentation Report

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📁 Project Path

C:\Users\91773\OneDrive\Desktop\Engine

⌚ Generated At

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1. Project Structure

{}

2. File Dependencies

```
{ ".\analyze_project.py": [], ".\combine_data.py": [ ".\analyze_project.py", ".\extract_commit_changes.py" ], ".\demo.py": [], ".\dependency_graph.py": [], ".\detect_changed_functions.py": [ ".\function_ranges.py", ".\parse_diff.py" ], ".\example.py": [], ".\extract_commit_changes.py": [ ".\detect_changed_functions.py", ".\function_ranges.py" ], ".\function_call_graph.py": [], ".\function_ranges.py": [], ".\generate_docs.py": [], ".\parse_diff.py": [], ".\read_commits.py": [] }
```

3. Function Dependencies

```
{ "analyze_file": [], "analyze_imports": [], "analyze_project": [ "get_python_files", "analyze_file" ], "attach_commit_changes": [], "build_dependency_data": [ "build_file_dependency_graph", "build_filtered_call_graph" ], "build_file_dependency_graph": [ "build_module_to_file_map", "get_python_files", "analyze_imports" ], "build_filtered_call_graph": [ "get_python_files", "extract_defined_functions", "extract_calls" ], "build_index_by_file": [], "build_module_to_file_map": [ "get_python_files", "get_module_name" ], "build_prompt": [], "combine": [ "analyze_project", "extract_commit_changes", "build_index_by_file", "attach_commit_changes" ], "detect_changed_functions": [ "get_function_ranges", "get_changed_lines" ], "extract_calls": [], "extract_commit_changes": [ "detect_changed_functions" ], "extract_defined_functions": [], "farewell": [], "generate_markdown": [], "get_changed_lines": [], "get_function_ranges": [], "get_module_name": [], "get_python_files": [], "greet": [], "load_json": [], "load_template": [], "main": [ "load_json", "load_template", "build_prompt", "simulate_llm", "simulate_llm" ], "simulate_llm": [] }
```

4. Git Commit History

- **Commit:** a534d38ce95db8db89afdb1f8c3fde4cef57a804
 - **Message:** Refactor greet and add farewell function
 - **Changed Functions:** ['farewell', 'greet']
-

- **Commit:** db08f4c0f9e9753b5221e12b92250a27d51a47d3
 - **Message:** Improve greeting format
 - **Changed Functions:** ['greet']
-

- **Commit:** 61828ed4f03c598ee8db21946e2b83d45e41bc85
 - **Message:** Add greet function
 - **Changed Functions:** ['greet']
-

5. Change Impact Analysis

```
{ "61828ed4f03c598ee8db21946e2b83d45e41bc85": { "greet": { "direct_and_indirect_impact": [], "risk": "LOW" } }, "a534d38ce95db8db89afdb1f8c3fde4cef57a804": { "farewell": { "direct_and_indirect_impact": [], "risk": "LOW" }, "greet": { "direct_and_indirect_impact": [], "risk": "LOW" } }, "db08f4c0f9e9753b5221e12b92250a27d51a47d3": { "greet": { "direct_and_indirect_impact": [], "risk": "LOW" } } }
```

6. Evolution Timeline

```
{ "farewell": [ { "commit": "a534d38", "message": "Refactor greet and add farewell function" } ], "greet": [ { "commit": "61828ed", "message": "Add greet function" }, { "commit": "db08f4c", "message": "Improve greeting format" }, { "commit": "a534d38", "message": "Refactor greet and add farewell function" } ] }
```

7. Diff Explanations

Commit: a534d38ce95db8db89afdb1f8c3fde4cef57a804 | Function: **farewell**

File: .\demo.py - Summary: A docstring was added to the function. Return statement or returned value was modified. Function farewell was added: def farewell(name) :.

Commit: a534d38ce95db8db89afdb1f8c3fde4cef57a804 | Function: **greet**

File: .\demo.py - Summary: A docstring was added to the function. Return statement or returned value was modified.

Commit: db08f4c0f9e9753b5221e12b92250a27d51a47d3 | Function: greet

File: .\demo.py - Summary: String/formatting change detected. Example removed: `return "Hello " + name` → added: `return "Hello, " + name + "!"`. Return statement or returned value was modified.

Commit: 61828ed4f03c598ee8db21946e2b83d45e41bc85 | Function: greet

File: .\demo.py - Summary: Return statement or returned value was modified. Function greet was added: `def greet(name) :`

8. Suggested Docstrings

File: .\analyze_project.py | Function: get_python_files

Arguments: ['folder_path']

Has Return: True

""" Get python files.

Parameters: folder_path (any): Description.

Returns: any: Description.

"""

File: .\analyze_project.py | Function: analyze_file

Arguments: ['file_path']

Has Return: True

""" Analyze file.

Parameters: file_path (any): Description.

Returns: any: Description.

"""

File: .\analyze_project.py | Function: analyze_project

Arguments: ['folder_path']

Has Return: True

""" Analyze project.

Parameters: folder_path (any): Description.

Returns: any: Description.

"""

File: .\analyze_project.py | Function: generate_markdown

Arguments: ['project_data', 'output_file']

Has Return: False

""" Generate markdown.

Parameters: project_data (any): Description. output_file (any): Description.

"""

File: .\combine_data.py | Function: combine

Arguments: ['project_path']

Has Return: True

""" Combine.

Parameters: project_path (any): Description.

Returns: any: Description.

"""

File: .\dependency_graph.py | Function: get_python_files

Arguments: ['folder']

Has Return: True

""" Get python files.

Parameters: folder (any): Description.

Returns: any: Description.

"""

File: .\dependency_graph.py | Function: get_module_name

Arguments: ['file_path']

Has Return: True

""" Get module name.

Parameters: file_path (any): Description.

Returns: any: Description.

"""

File: .\dependency_graph.py | Function: build_module_to_file_map

Arguments: ['folder']

Has Return: True

""" Build module to file map.

Parameters: folder (any): Description.

Returns: any: Description.

"""

File: .\dependency_graph.py | Function: analyze_imports

Arguments: ['file_path']

Has Return: True

""" Analyze imports.

Parameters: file_path (any): Description.

Returns: any: Description.

"""

File: .\dependency_graph.py | Function: build_file_dependency_graph

Arguments: ['folder']

Has Return: True

""" Build file dependency graph.

Parameters: folder (any): Description.

Returns: any: Description.

"""

File: .\dependency_graph.py | Function: extract_defined_functions

Arguments: ['tree']

Has Return: True

""" Extract defined functions.

Parameters: tree (any): Description.

Returns: any: Description.

"""

File: .\dependency_graph.py | Function: extract_calls

Arguments: ['func_node']

Has Return: True

""" Extract calls.

Parameters: func_node (any): Description.

Returns: any: Description.

"""

File: .\dependency_graph.py | Function: build_filtered_call_graph

Arguments: ['folder']

Has Return: True

""" Build filtered call graph.

Parameters: folder (any): Description.

Returns: any: Description.

"""

File: .\dependency_graph.py | Function: build_dependency_data

Arguments: ['folder']

Has Return: True

""" Build dependency data.

Parameters: folder (any): Description.

Returns: any: Description.

"""

File: .\detect_changed_functions.py | Function: detect_changed_functions

Arguments: ['file_path', 'diff_text']

Has Return: True

""" Detect changed functions.

Parameters: file_path (any): Description. diff_text (any): Description.

Returns: any: Description.

"""

File: .\diagram_generator.py | Function: load_dependencies

Arguments: []

Has Return: True

""" Load dependencies.

Returns: any: Description.

"""

File: .\diagram_generator.py | Function: generate_file_dependency_mermaid

Arguments: ['files']

Has Return: True

""" Generate file dependency mermaid.

Parameters: files (any): Description.

Returns: any: Description.

"""

File: .\diagram_generator.py | Function: generate_function_dependency_mermaid

Arguments: ['funcs']

Has Return: True

""" Generate function dependency mermaid.

Parameters: funcs (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: load_commit_changes

Arguments: ['path']

Has Return: True

""" Load commit changes.

Parameters: path (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: normalize_code_line

Arguments: ['s']

Has Return: True

""" Normalize code line.

Parameters: s (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: detect_punctuation_change

Arguments: ['added', 'removed']

Has Return: True

""" Detect punctuation change.

Parameters: added (any): Description. removed (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: detect_signature_change

Arguments: ['added', 'removed', 'func_name']

Has Return: True

""" Detect signature change.

Parameters: added (any): Description. removed (any): Description. func_name (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: detect_docstring_change

Arguments: ['added', 'removed']

Has Return: True

""" Detect docstring change.

Parameters: added (any): Description. removed (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: detect_return_change

Arguments: ['added', 'removed']

Has Return: True

""" Detect return change.

Parameters: added (any): Description. removed (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: detect_logic_change

Arguments: ['added', 'removed']

Has Return: True

""" Detect logic change.

Parameters: added (any): Description. removed (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: explain_changes_for_function

Arguments: ['file_path', 'func_name', 'diff_text']

Has Return: True

""" Explain changes for function.

Parameters: file_path (any): Description. func_name (any): Description. diff_text (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: build_explanations

Arguments: ['output_md', 'output_json']

Has Return: True

""" Build explanations.

Parameters: output_md (any): Description. output_json (any): Description.

Returns: any: Description.

"""

File: .\diff_explainer.py | Function: get_python_files

Arguments: ['folder']

Has Return: True

""" Get python files.

Parameters: folder (any): Description.

Returns: any: Description.

"""

File: .\docstring_generator.py | Function: get_python_files

Arguments: ['folder']

Has Return: False

""" Get python files.

Parameters: folder (any): Description.

"""

File: .\docstring_generator.py | Function: build_docstring

Arguments: ['func_name', 'args', 'has_return']

Has Return: True

""" Build docstring.

Parameters: func_name (any): Description. args (any): Description. has_return (any): Description.

Returns: any: Description.

"""

File: .\docstring_generator.py | Function: analyze_file

Arguments: ['file_path']

Has Return: True

""" Analyze file.

Parameters: file_path (any): Description.

Returns: any: Description.

"""

File: .\docstring_generator.py | Function: generate_docstrings

Arguments: []

Has Return: True

""" Generate docstrings.

Returns: any: Description.

"""

File: .\extract_commit_changes.py | Function: extract_commit_changes

Arguments: []

Has Return: True

""" Extract commit changes.

Returns: any: Description.

"""

File: .\function_call_graph.py | Function: get_python_files

Arguments: ['folder']

Has Return: True

""" Get python files.

Parameters: folder (any): Description.

Returns: any: Description.

"""

File: .\function_call_graph.py | Function: extract_defined_functions

Arguments: ['tree']

Has Return: True

""" Extract defined functions.

Parameters: tree (any): Description.

Returns: any: Description.

"""

File: .\function_call_graph.py | Function: extract_calls

Arguments: ['func_node']

Has Return: True

""" Extract calls.

Parameters: func_node (any): Description.

Returns: any: Description.

"""

File: .\function_call_graph.py | Function: build_filtered_call_graph

Arguments: ['folder']

Has Return: True

""" Build filtered call graph.

Parameters: folder (any): Description.

Returns: any: Description.

"""

File: .\function_ranges.py | Function: get_function_ranges

Arguments: ['file_path']

Has Return: True

""" Get function ranges.

Parameters: file_path (any): Description.

Returns: any: Description.

"""

File: .\function_timeline.py | Function: load_commit_changes

Arguments: []

Has Return: True

""" Load commit changes.

Returns: any: Description.

"""

File: .\function_timeline.py | Function: build_timeline

Arguments: []

Has Return: True

""" Build timeline.

Returns: any: Description.

"""

File: .\generate_docs.py | Function: load_json

Arguments: ['path']

Has Return: True

""" Load json.

Parameters: path (any): Description.

Returns: any: Description.

"""

File: .\generate_docs.py | Function: load_template

Arguments: ['path']

Has Return: True

""" Load template.

Parameters: path (any): Description.

Returns: any: Description.

"""

File: .\generate_docs.py | Function: build_prompt

Arguments: ['template', 'data']

Has Return: True

""" Build prompt.

Parameters: template (any): Description. data (any): Description.

Returns: any: Description.

"""

File: .\generate_docs.py | Function: simulate_llm

Arguments: ['prompt']

Has Return: True

""" Simulate llm.

Parameters: prompt (any): Description.

Returns: any: Description.

"""

File: .\generate_docs.py | Function: main

Arguments: []

Has Return: False

""" Main.

"""

File: .\impact_analysis.py | Function: load_dependencies

Arguments: []

Has Return: True

""" Load dependencies.

Returns: any: Description.

"""

File: .\impact_analysis.py | Function: load_commit_changes

Arguments: []

Has Return: True

""" Load commit changes.

Returns: any: Description.

"""

File: .\impact_analysis.py | Function: build_reverse_dependency_graph

Arguments: ['func_graph']

Has Return: True

""" Build reverse dependency graph.

Parameters: func_graph (any): Description.

Returns: any: Description.

"""

File: .\impact_analysis.py | Function: get_full_impact

Arguments: ['changed_function', 'reverse_graph']

Has Return: True

""" Get full impact.

Parameters: changed_function (any): Description. reverse_graph (any): Description.

Returns: any: Description.

"""

File: .\impact_analysis.py | Function: calculate_risk_level

Arguments: ['impact_list']

Has Return: True

""" Calculate risk level.

Parameters: impact_list (any): Description.

Returns: any: Description.

"""

File: .\impact_analysis.py | Function: build_cia_report

Arguments: []

Has Return: True

""" Build cia report.

Returns: any: Description.

"""

9. Quality Issues

```
{ ".\analyze_project.py": { "deep_nesting": [ { "function": "analyze_file", "nesting_depth": 5, "threshold": 3 }, { "function": "generate_markdown", "nesting_depth": 5, "threshold": 3 } ], "long_functions": [ { "function": "analyze_file", "length": 49, "threshold": 30 }, { "function": "generate_markdown", "length": 33, "threshold": 30 } ], "missing_docstrings":
```

```
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[] }, ".\dependency_graph.py": { "deep_nesting": [ { "function": "analyze_imports",
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"load_commit_changes", "normalize_code_line", "detect_punctuation_change",
"detect_signature_change", "detect_docstring_change", "detect_return_change",
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}, ".\extract_commit_changes.py": { "deep_nesting": [ { "function": "extract_commit_changes",
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"build_cia_report" ], "todo_comments": [], "too_many_parameters": [] }, ".\parse_diff.py": {
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"nesting_depth": 4, "threshold": 3 }, { "function": "analyze_quality",
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```

```
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```

10. Naming Issues

```
{ ".\analyze_project.py": { "bad_classes": [], "bad_constants": [], "bad_functions": [],  
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"bad_functions": [], "bad_variables": [] }, ".\dependency_graph.py": { "bad_classes": [],  
"bad_constants": [], "bad_functions": [], "bad_variables": [] }, ".\detect_changed_functions.py":  
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{ "bad_classes": [], "bad_constants": [], "bad_functions": [], "bad_variables": [] }, ".\  
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\unused_function_detector.py": { "bad_classes": [], "bad_constants": [], "bad_functions": [],  
"bad_variables": [] } }
```

11. Duplicate Functions

```
{ "1b264798cb01680e5826fcf3f602958c": [ { "file": ".\diagram_generator.py", "hash":  
"1b264798cb01680e5826fcf3f602958c", "name": "load_dependencies" }, { "file": ".\  
\impact_analysis.py", "hash": "1b264798cb01680e5826fcf3f602958c", "name":  
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\dependency_graph.py", "hash": "2afbc069f21d7ff2e7db723fd6a7e530", "name":  
"get_python_files" }, { "file": ".\diff_explainer.py", "hash":  
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\duplicate_detector.py", "hash": "308610df5dde9ddaa404ecb64205a586", "name":  
"get_python_files" }, { "file": ".\naming_checker.py", "hash":  
"308610df5dde9ddaa404ecb64205a586", "name": "get_python_files" } ],  
"4598621cea21282720223f6cf672a6c": [ { "file": ".\diff_explainer.py", "hash":  
"4598621cea21282720223f6cf672a6c", "name": "load_commit_changes" }, { "file": ".\  
\generate_docs.py", "hash": "4598621cea21282720223f6cf672a6c", "name": "load_json" } ],  
"4d5e807fc3c2a3f86c3df65bb66b5ee9": [ { "file": ".\function_timeline.py", "hash":
```

```
"4d5e807fc3c2a3f86c3df65bb66b5ee9", "name": "load_commit_changes" }, { "file": ".\impact_analysis.py", "hash": "4d5e807fc3c2a3f86c3df65bb66b5ee9", "name": "load_commit_changes" } ], "58f3e1b2b6b717d869dbf30266b2cac1": [ { "file": ".\dependency_graph.py", "hash": "58f3e1b2b6b717d869dbf30266b2cac1", "name": "extract_calls" }, { "file": ".\function_call_graph.py", "hash": "58f3e1b2b6b717d869dbf30266b2cac1", "name": "extract_calls" } ], "b7666d20d7ce046aed487160015b520f": [ { "file": ".\dependency_graph.py", "hash": "b7666d20d7ce046aed487160015b520f", "name": "extract_defined_functions" }, { "file": ".\function_call_graph.py", "hash": "b7666d20d7ce046aed487160015b520f", "name": "extract_defined_functions" } ], "eeac32903a387104467ff303f577beef": [ { "file": ".\quality_checker.py", "hash": "eeac32903a387104467ff303f577beef", "name": "get_python_files" }, { "file": ".\unused_function_detector.py", "hash": "eeac32903a387104467ff303f577beef", "name": "get_python_files" } ], "f7f8181915de8dcf1d6f5641d25e81d4": [ { "file": ".\dependency_graph.py", "hash": "f7f8181915de8dcf1d6f5641d25e81d4", "name": "build_filtered_call_graph" }, { "file": ".\function_call_graph.py", "hash": "f7f8181915de8dcf1d6f5641d25e81d4", "name": "build_filtered_call_graph" } ] }
```

12. Unused Functions

```
{ ".\demo.py": [ "greet", "farewell" ], ".\example.py": [ "greet", "say_hi" ] }
```

13. Metadata

```
{ "generated_at": "2025-11-29T15:05:42.273086", "merged_unused_at": "2025-11-29T15:18:16.089804", "project_path": "C:\Users\91773\OneDrive\Desktop\Engine", "unused_source": "C:\Users\91773\OneDrive\Desktop\Engine\unused_functions.json", "version": "2.0" }
```

End of Report