

IT314 – Software Engineering

Group 22 – Fingenie

AI – Powered Balance Sheet Analysis Tool

Mutation Testing

Team Members:

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|------------------------------|------------|
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learning

```
(venv) PS C:\Users\Admin\Fingenie> python view_results.py
```

```
=====  
          MUTATION SCORE CARD  
=====
```

```
SURVIVED      : 26  
KILLED        : 106
```

```
-----  
TOTAL MUTANTS : 132  
FINAL SCORE   : 80.30%
```

Chatbot

```
📁 Reading results from: .mutmut-cache
```

```
=====  
          MUTATION SCORE CARD  
=====
```

```
SURVIVED      : 26  
KILLED        : 109
```

```
-----  
TOTAL MUTANTS : 135  
FINAL SCORE   : 80.74%
```

```
⚠ To reach 100%, fix these lines:
```

```
  Lines: 11, 13, 22, 32, 34, 37, 52, 64, 72, 73, 79, 80, 83, 86, 89, 95, 96, 111, 113, 118
```

AI_Insights

```
1. Running tests without mutations  
! Running...Done
```

```
2. Checking mutants
```

```
! 92/92 🚫 58 🚫 0 🚫 0 🚫 34 🚫 0
```

```
(venv) PS C:\Users\Admin\Fingenie> python view_results.py
```

```
📁 Reading results from: .mutmut-cache
```

```
=====  
          MUTATION SCORE CARD  
=====
```

```
SURVIVED      : 34  
KILLED        : 58
```

```
-----  
TOTAL MUTANTS : 92  
FINAL SCORE   : 63.04%
```

```
⚠ To reach 100%, fix these lines:
```

```
  Lines: 21, 28, 31, 33, 45, 51, 55, 63, 64, 65, 76, 86, 88, 89, 91, 95, 97, 98, 99, 100, 109, 110, 115, 136, 139, 140
```

Balance sheet

MutPy mutation report

⌚ 29.11.2025 00:37

Target

- `apps.balance_sheet_comparator.views`
- `apps.balance_sheet_comparator.balance_sheet.services`

Tests [0]

- `apps.balance_sheet_comparator.tests.conftest` [0.069 s]
- `apps.balance_sheet_comparator.tests.test_comparison_evaluation` [0.553 s]
- `apps.balance_sheet_comparator.tests.test_models` [0.545 s]
- `apps.balance_sheet_comparator.tests.test_ratio_calculator` [0.588 s]
- `apps.balance_sheet_comparator.tests.test_services` [0.492 s]
- `apps.balance_sheet_comparator.tests.test_views` [0.509 s]

Result summary

- **All Score** - 100%
- ⌚ Time - 135.1 s

Mutants [144]

- **killed** - 127
- **survived** - 0
- **incompetent** - 17
- **timeout** - 0



Accounts

MutPy mutation report

⌚ 29.11.2025 02:28

Target

- `apps.accounts.views`

Tests [23]

- `apps.accounts.tests.test_views` [18.309 s]

Result summary

- **All Score** - 100.0%
- ⌚ Time - 781.8 s

Mutants [125]

- **killed** - 90
- **survived** - 0
- **incompetent** - 35
- **timeout** - 0



| # | Module | Operator | Tests run | Duration | Result | |
|---|-----------|----------|-----------|----------|---------------------|---|
| 1 | ASR [186] | | 6 | 9.934 s | killed | ➡ |
| 2 | COD [38] | | 6 | 7.011 s | killed | ➡ |
| 3 | COD [42] | | 6 | 6.387 s | killed | ➡ |
| 4 | COD [58] | | 6 | 8.533 s | killed | ➡ |

News page

```
- Mutation testing starting -
```

These are the steps:

1. A full test suite run will be made to make sure we can run the tests successfully and we know how long it takes (to detect infinite loops for example)
2. Mutants will be generated and checked

Results are stored in `.mutmut-cache`.

Print found mutants with ``mutmut results``.

Legend for output:

| | |
|-------------------|--|
| 🔴 Killed mutants. | The goal is for everything to end up in this bucket. |
| ⏰ Timeout. | Test suite took 10 times as long as the baseline so were killed. |
| 🧐 Suspicious. | Tests took a long time, but not long enough to be fatal. |
| 😊 Survived. | This means your tests need to be expanded. |
| ⏭ Skipped. | Skipped. |

1. Using cached time for baseline tests, to run baseline again delete the cache file

2. Checking mutants

```
.: 67/67 🔴 62 ⏳ 0 🧐 0 😞 5 ⏷ 0
```

mutation score achieved was $62/67=0.9253$ i.e **92.53%**

For the blog app

```
D:\IT314 project\it314>mutmut run --paths-to-mutate=./blog/views.py --tests-dir=blog/tests
```

```
- Mutation testing starting -
```

These are the steps:

1. A full test suite run will be made to make sure we can run the tests successfully and we know how long it takes (to detect infinite loops for example)
2. Mutants will be generated and checked

Results are stored in .mutmut-cache.

Print found mutants with `mutmut results`.

Legend for output:

- 💀 Killed mutants. The goal is for everything to end up in this bucket.
- ⌚ Timeout. Test suite took 10 times as long as the baseline so were killed.
- 🧐 Suspicious. Tests took a long time, but not long enough to be fatal.
- 🥳 Survived. This means your tests need to be expanded.
- ⏩ Skipped. Skipped.

mutmut cache is out of date, clearing it...

1. Running tests without mutations
- ⋮. Running...Done

2. Checking mutants

⋯ 132/132 💀 105 ⌚ 0 🙄 0 😳 27 ⏪ 0

the mutation score achieved is $105/132=0.7954$ i.e. **79.54%**

Data processor:

1)Utils

```

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL PORTS SONARQUBE
===== 8 failed, 125 passed, 3 warnings in 55.26s =====
ame : The term 'ame' is not recognized as the name of a cmdlet, function, script file, or operable program. Check the
spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:2 char:1 ...
(venv312) PS C:\Users\Jay\Downloads\Fingenie> ./venv312\Scripts\python.exe .\venv312\Scripts\mut.py ^
>> --target apps.dataprocessor.utils ^
>> --unit-test apps.dataprocessor.tests_mutation.test_utils_mutation_strong ^
>> --report-html mutation_utils_strong
>>
[*] Start mutation process:
  - targets: apps.dataprocessor.utils
  - tests: apps.dataprocessor.tests_mutation.test_utils_mutation_strong
[*] 10 tests passed:
  - apps.dataprocessor.tests_mutation.test_utils_mutation_strong [0.00385 s]
[*] Start mutants generation and execution:
  - [# 1] AOD apps.dataprocessor.utils: [0.00100 s] killed by test_parse_line_parses_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_parse_line_parses_numbers)
    - [# 2] AOR apps.dataprocessor.utils: [0.00000 s] incompetent
    - [# 3] AOR apps.dataprocessor.utils: [0.00000 s] incompetent
    - [# 4] AOR apps.dataprocessor.utils: [0.00100 s] incompetent
    - [# 5] AOR apps.dataprocessor.utils: [0.00101 s] killed by test_parse_line_parses_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_parse_line_parses_numbers)
    - [# 6] AOR apps.dataprocessor.utils: [0.00100 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
    - [# 7] AOR apps.dataprocessor.utils: [0.00101 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
    - [# 8] AOR apps.dataprocessor.utils: [0.00100 s] killed by test_format_currency (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_format_currency)
    - [# 9] BCR apps.dataprocessor.utils: [0.00000 s] incompetent
    - [# 10] BCR apps.dataprocessor.utils: [0.00000 s] incompetent
    - [# 11] BCR apps.dataprocessor.utils: [0.00000 s] incompetent
    - [# 12] COD apps.dataprocessor.utils: [0.00100 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
    - [# 13] COD apps.dataprocessor.utils: [0.00100 s] killed by test_clean_section_removes_junk_and_dedup (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_clean_section_removes_junk_and_dedup)
    - [# 14] COI apps.dataprocessor.utils: [0.00101 s] killed by test_detect_section_variants (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_detect_section_variants)
    - [# 15] COI apps.dataprocessor.utils: [0.00100 s] killed by test_detect_section_variants (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_detect_section_variants)

[*] Mutation score [5.31979 s]: 100.0%
  - all: 61
  - killed: 49 (80.3%)
  - survived: 0 (0.0%)
  - incompetent: 12 (19.7%)
  - timeout: 0 (0.0%)

```

```

(venv312) PS C:\Users\Jay\Downloads\Fingenie> ./venv312\Scripts\python.exe .\venv312\Scripts\mut.py ^
>> --target apps.dataprocessor.utils ^
>> --unit-test apps.dataprocessor.tests_mutation.test_utils_mutation_strong ^
>> --report-html mutation_utils_strong
>>
  - [# 45] LCR apps.dataprocessor.utils: [0.00100 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
  - [# 46] R0N apps.dataprocessor.utils: [0.00034 s] killed by test_clean_particular_title_case (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_clean_particular_title_case)
  - [# 47] R0R apps.dataprocessor.utils: [0.00151 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
  - [# 48] R0N apps.dataprocessor.utils: [0.00300 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
  - [# 49] R0R apps.dataprocessor.utils: [0.00101 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
  - [# 53] R0R apps.dataprocessor.utils: [0.00100 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
  - [# 54] R0R apps.dataprocessor.utils: [0.00100 s] killed by test_clean_section_removes_junk_and_dedup (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_clean_section_removes_junk_and_dedup)
  - [# 55] R0R apps.dataprocessor.utils: [0.00100 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
  - [# 56] R0R apps.dataprocessor.utils: [0.00100 s] killed by test_format_currency (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_format_currency)
  - [# 57] R0R apps.dataprocessor.utils: [0.00100 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
  - [# 58] R0R apps.dataprocessor.utils: [0.00100 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
  - [# 59] R0R apps.dataprocessor.utils: [0.00100 s] killed by test_process_page_returns_none_if_not_enough_numbers (apps.dataprocessor.tests_mutation.test_utils_mutation_strong.TestUtilsMutationStrong.test_process_page_returns_none_if_not_enough_numbers)
  - [# 60] SIR apps.dataprocessor.utils: [0.00000 s] incompetent
  - [# 61] SIR apps.dataprocessor.utils: [0.00000 s] incompetent

[*] Mutation score [5.31979 s]: 100.0%
  - all: 61
  - killed: 49 (80.3%)
  - survived: 0 (0.0%)
  - incompetent: 12 (19.7%)
  - timeout: 0 (0.0%)

```

2) Scoring

```
(venv312) PS C:\Users\Jay\Downloads\Fingenie> .\venv312\Scripts\python.exe .\venv312\Scripts\mut.py --target apps.dataprocessor.scoring --unit-test apps.dataprocessor.tests_mutation.test_scoring_mutation_killer --report-html mutation_scoring_killer
[*] Start mutation process:
  - targets: apps.dataprocessor.scoring
  - tests: apps.dataprocessor.tests_mutation.test_scoring_mutation_killer
Liquidity Score: 75.00/100
  Healthy liquidity.

[*] 6 tests passed:
  - apps.dataprocessor.tests_mutation.test_scoring_mutation_killer [0.02414 s]
[*] Start mutants generation and execution:
  - [# 1] AOD apps.dataprocessor.scoring: [0.01354 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
st_scoring_mutation_killer.TestScoringMutationKiller.test_compute_subscores_exact_oracles)
  - [# 2] AOD apps.dataprocessor.scoring: [0.00103 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
st_scoring_mutation_killer.TestScoringMutationKiller.test_compute_subscores_exact_oracles)
  - [# 3] AOD apps.dataprocessor.scoring: Liquidity Score: 75.00/100
    Healthy liquidity.

[0.02012 s] survived
  - [# 4] AOR apps.dataprocessor.scoring: [0.00000 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
st_scoring_mutation_killer.TestScoringMutationKiller.test_compute_subscores_exact_oracles)
  - [# 5] AOR apps.dataprocessor.scoring: [0.00128 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
st_scoring_mutation_killer.TestScoringMutationKiller.test_compute_subscores_exact_oracles)
  - [# 6] AOR apps.dataprocessor.scoring: [0.00100 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
st_scoring_mutation_killer.TestScoringMutationKiller.test_compute_subscores_exact_oracles)
  - [# 7] AOR apps.dataprocessor.scoring: [0.00000 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
st_scoring_mutation_killer.TestScoringMutationKiller.test_compute_subscores_exact_oracles)
  - [# 8] AOR apps.dataprocessor.scoring: [0.00000 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
st_scoring_mutation_killer.TestScoringMutationKiller.test_compute_subscores_exact_oracles)
  - [# 9] AOR apps.dataprocessor.scoring: [0.00000 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
```

```
>>
[0.01900 s] survived
  - [# 105] AOR apps.dataprocessor.scoring: Liquidity Score: 75.00/100
    Healthy liquidity.

[0.06251 s] survived
  - [# 106] COI apps.dataprocessor.scoring: [0.00100 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
st_scoring_mutation_killer.TestScoringMutationKiller.test_compute_subscores_exact_oracles)
  - [# 107] COI apps.dataprocessor.scoring: [0.00000 s] killed by test_compute_subscores_exact_oracles (apps.dataprocessor.tests_mutation.te
st_scoring_mutation_killer.TestScoringMutationKiller.test_compute_subscores_exact_oracles)
  - [# 108] LCR apps.dataprocessor.scoring: Liquidity Score: 75.00/100
    Healthy liquidity.

[0.01800 s] incompetent
[*] Mutation score [4.50834 s]: 94.4%
  - all: 108
  - killed: 101 (93.5%)
  - survived: 6 (5.6%)
  - incompetent: 1 (0.9%)
  - timeout: 0 (0.0%)
* (venv312) PS C:\Users\Jay\Downloads\Fingenie>
```

3) Services

```
[0.00916 s] killed by test_load_pdf_robust_prefers_pypdfloader_when_large (apps.dataprocessor.tests_mutation.test_services_mutation_strong.TestServicesMutationStrong.test_load_pdf_robust_prefers_pypdfloader_when_large)
  - [# 76] ROR apps.dataprocessor.services: Using manual extraction fallback...
  ~w.. Manual extraction successful: 1 items
  ~E Extraction failed: boom
Using Gemini 2.5 Flash for financial data extraction...
Extracting financial data with AI...
~w.. Successfully extracted 2 financial items
Calculating financial ratios with Gemini 2.5 Flash...
~w.. Ratios calculated: 1 ratios
Generating financial summary with Gemini 2.5 Flash...
~w.. Summary generated: 1 pros, 1 cons
UnstructuredExcelLoader failed: boom, trying pandas fallback
Loading PDF...
Standard extraction poor quality: 5 chars - trying OCR
pdfplumber extraction: 2 pages
Loading PDF...
Standard extraction poor quality: 5 chars - trying OCR
pdfplumber extraction: 1 pages
[0.00899 s] killed by test_load_pdf_robust_prefers_pypdfloader_when_large (apps.dataprocessor.tests_mutation.test_services_mutation_strong.TestServicesMutationStrong.test_load_pdf_robust_prefers_pypdfloader_when_large)
  - [# 77] SIR apps.dataprocessor.services: [0.00000 s] incompetent
  - [# 78] SIR apps.dataprocessor.services: [0.00000 s] incompetent
  - [# 79] SIR apps.dataprocessor.services: [0.00000 s] incompetent
  - [# 80] SIR apps.dataprocessor.services: [0.00000 s] incompetent
[*] Mutation score [11.45923 s]: 100.0%
  - all: 80
  - killed: 56 (70.0%)
  - survived: 0 (0.0%)
  - incompetent: 24 (30.0%)
  - timeout: 0 (0.0%)
=====
Running mutation test for apps.dataprocessor.urls
=====
```

4)Urls

```
pr\tests_mutation\test_scoring_mutation_strong )
(venv312) PS C:\Users\Jay\Downloads\fingenie> .\venv312\Scripts\python.exe .\venv312\Scripts\mut.py
>>>   --target apps.dataprocessor.urls
>>>   --unit-test apps.dataprocessor.tests_mutation.test_urls_mutation_strong
>>>   --report-html mutation urls.strong
>>>
[*] Start mutation process:
  - targets: apps.dataprocessor.urls
  - tests: apps.dataprocessor.tests_mutation.test_urls_mutation_strong
[*] 10 tests passed:
  - apps.dataprocessor.tests_mutation.test_urls_mutation_strong [1.50727 s]
[*] Start mutants generation and execution:
[*] Mutation score [3.37386 s]: 0.0%
  - all: 0
Traceback (most recent call last):
  File "C:\Users\Jay\Downloads\fingenie\venv312\Scripts\mut.py", line 7, in <module>
    commandline.main(sys.argv)
  File "C:\Users\Jay\Downloads\fingenie\venv312\Lib\site-packages\mutpy\commandline.py", line 10, in main
    run_mutpy(parser)
  File "C:\Users\Jay\Downloads\fingenie\venv312\Lib\site-packages\mutpy\commandline.py", line 62, in run_mutpy
    mutation_controller.run()
  File "C:\Users\Jay\Downloads\fingenie\venv312\Lib\site-packages\mutpy\controller.py", line 67, in run
    self.notify_end(self.score, timer.stop())
  File "C:\Users\Jay\Downloads\fingenie\venv312\Lib\site-packages\mutpy\views.py", line 35, in <lambda>
    return lambda *args, **kwargs: self.notify_all_views(notify, *args, **kwargs)
                                         ^^^^^^^^^^
File "C:\Users\Jay\Downloads\fingenie\venv312\Lib\site-packages\mutpy\views.py", line 30, in notify_all_views
  attr(*args, **kwargs)
```

5) Views

```
(venv312) PS C:\Users\Jay\Downloads\Fingenie> .\venv312\Scripts\python.exe .\venv312\Scripts\mut.py ^
>>   --target apps.dataprocessor.views ^
>>   --unit-test apps.dataprocessor.tests mutation.test_views_mutation_strong ^
>>   --report-html mutation_views_strong
>>
- [# 68] EXS apps.dataprocessor.views: [0.00000 s] incompetent
- [# 69] EXS apps.dataprocessor.views: [0.00000 s] incompetent
- [# 70] EXS apps.dataprocessor.views: [0.00000 s] incompetent
- [# 71] EXS apps.dataprocessor.views: [0.00000 s] incompetent
- [# 72] EXS apps.dataprocessor.views: [0.00000 s] incompetent
- [# 73] EXS apps.dataprocessor.views: [0.00000 s] incompetent
- [# 74] EXS apps.dataprocessor.views: [0.00000 s] incompetent
- [# 75] IOD apps.dataprocessor.views: [0.00000 s] incompetent
- [# 76] LCR apps.dataprocessor.views: [0.00000 s] survived
- [# 77] LCR apps.dataprocessor.views: [0.00000 s] survived
- [# 78] LCR apps.dataprocessor.views: [0.00102 s] survived
- [# 79] LCR apps.dataprocessor.views: [0.00100 s] survived
- [# 80] LCR apps.dataprocessor.views: [0.00000 s] survived
- [# 81] LCR apps.dataprocessor.views: [0.00145 s] survived
- [# 82] ROR apps.dataprocessor.views: [0.00083 s] survived
- [# 83] ROR apps.dataprocessor.views: [0.00018 s] survived
- [# 84] ROR apps.dataprocessor.views: [0.00000 s] survived
- [# 85] ROR apps.dataprocessor.views: [0.00000 s] survived
- [# 86] SCI apps.dataprocessor.views: [0.00000 s] incompetent
- [# 87] SIR apps.dataprocessor.views: [0.00000 s] incompetent
- [# 88] SIR apps.dataprocessor.views: [0.00000 s] incompetent
- [# 89] SIR apps.dataprocessor.views: [0.00000 s] incompetent
[*] Mutation score [10.71407 s]: 0.0%
- all: 89
- killed: 0 (0.0%)
- survived: 57 (64.0%)
- incompetent: 32 (36.0%)
- timeout: 0 (0.0%)
> (venv312) PS C:\Users\Jay\Downloads\Fingenie>
```

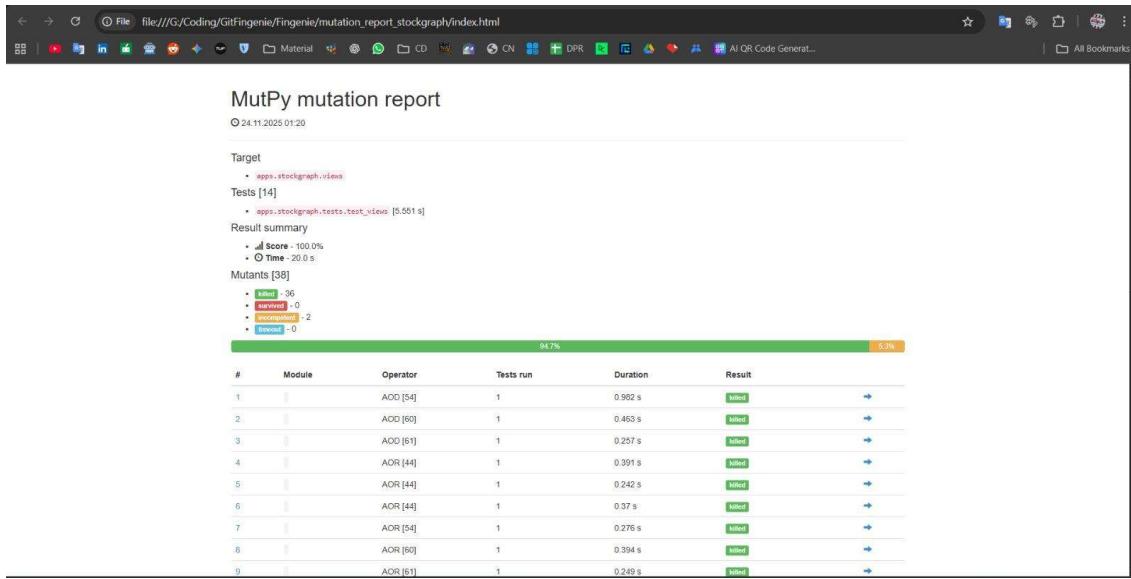
Trends

```
Standard extraction failed: Stream has ended unexpectedly - trying OCR
invalid pdf header: b'conte'
pdfplumber failed entirely: No /Root object! - Is this really a PDF?
Failed to load document: file1_2021.pdf
EOF marker not found
pdfplumber failed entirely: No /Root object! - Is this really a PDF?
Standard extraction failed: Stream has ended unexpectedly - trying OCR
Failed to load document: file2_2022.pdf
pdfplumber failed entirely: No /Root object! - Is this really a PDF?
Failed to load document: file3_2023.pdf
Parallel processing complete: 0 files processed successfully
[0.69211 s] killed by test_api_endpoint_comprehensive (apps.trends.tests.mutation_test.FileProcessingMutationKillers)
[*] Mutation score [1975.58107 s]: 100.0%
- all: 578
- killed: 498 (86.2%)
- survived: 0 (0.0%)
- incompetent: 2 (0.3%)
- timeout: 78 (13.5%)
> (venv) PS D:\Software_Engineering\Fingenie>
```

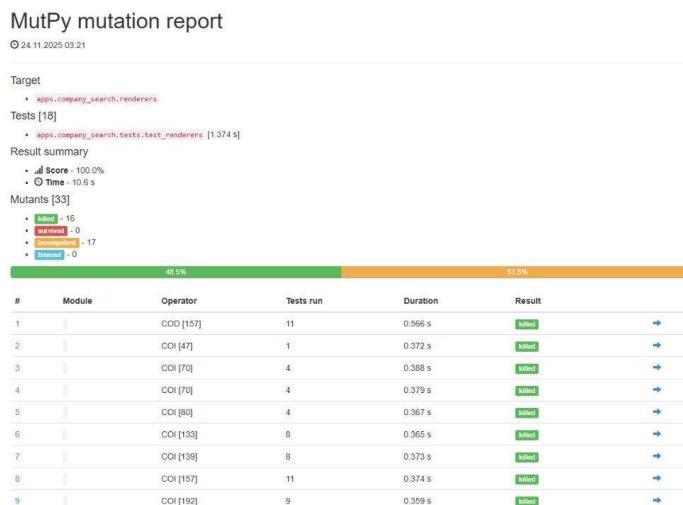
Sector overview

```
getmanymanyrequests
yfinance test failed: Expecting value: line 1 column 1 (char 0)
[3.20687 s] killed by test_fetch_fresh_data_all_sectors_fail (apps.sector_overview.tests.mutation_test.TestFetchFreshSectorData)
[*] Mutation score [1413.16578 s]: 100.0%
- all: 150
- killed: 150 (100.0%)
- survived: 0 (0.0%)
- incompetent: 0 (0.0%)
- timeout: 0 (0.0%)
> (venv) PS D:\Software_Engineering\Fingenie>
```

Stock graph



Company search



MutPy mutation report

⌚ 24.11.2025 13:32

Target

- `apps.company_search.utils`

Tests [24]

- `apps.company_search.tests.test_utils` [1.524 s]

Result summary

- **All Score** - 78.4%

- **Time** - 24.0 s

Mutants [81]

- **Killed** - 40
- **Survived** - 11
- **Unkilled** - 30
- **Ignored** - 0

| # | Module | Operator | Tests run | Duration | Result | |
|---|--------|-----------|-----------|----------|---------------------|---|
| 1 | | AOR [179] | 3 | 0.492 s | Passed | ↗ |
| 2 | | AOR [179] | 3 | 0.336 s | Passed | ↗ |
| 3 | | AOR [181] | 3 | 0.326 s | Passed | ↗ |
| 4 | | AOR [181] | 3 | 0.327 s | Passed | ↗ |
| 5 | | AOR [183] | 4 | 0.336 s | Passed | ↗ |
| 6 | | AOR [183] | 4 | 0.359 s | Passed | ↗ |
| 7 | | AOR [208] | 6 | 0.343 s | Passed | ↗ |
| 8 | | AOR [208] | 6 | 0.352 s | Passed | ↗ |
| 9 | | AOR [208] | 6 | 0.336 s | Passed | ↗ |

MutPy mutation report

⌚ 24.11.2025 13:36

Target

- `apps.company_search.models`

Tests [22]

- `apps.company_search.tests.test_models` [2.43 s]

Result summary

- **All Score** - 88.2%

- **Time** - 17.0 s

Mutants [33]

- **Killed** - 16
- **Survived** - 2
- **Unkilled** - 16
- **Ignored** - 0

| # | Module | Operator | Tests run | Duration | Result | |
|---|--------|-----------|-----------|----------|-------------------------|---|
| 1 | | AOR [100] | 7 | 0.629 s | Incomplete | ↗ |
| 2 | | ACR [110] | 6 | 0.463 s | Passed | ↗ |
| 3 | | AOR [217] | 8 | 0.485 s | Passed | ↗ |
| 4 | | AOR [255] | 22 | 0.529 s | Survived | ↗ |
| 5 | | AOR [261] | 16 | 0.511 s | Passed | ↗ |
| 6 | | ASR [92] | 4 | 0.494 s | Passed | ↗ |
| 7 | | COD [216] | 8 | 0.499 s | Passed | ↗ |
| 8 | | COD [229] | 13 | 0.506 s | Passed | ↗ |
| 9 | | COI [251] | 8 | 0.505 s | Passed | ↗ |

MutPy mutation report

⌚ 24.11.2025 13:40

Target

- `apps.company_search.serializers`

Tests [27]

- `apps.company_search.tests.test_serializer` [1.251 s]

Result summary

- **All Score** - 96.6%
- **Time** - 37.1 s

Mutants [72]

- **Killed** - 56
- **Survived** - 2
- **Incomplete** - 14
- **Scored** - 0

| # | Module | Operator | Tests run | Duration | Result | Actions |
|---|--------|-----------|-----------|----------|--------|---------|
| 1 | | AOR [68] | 3 | 0.554 s | Killed | ⊕ |
| 2 | | AOR [134] | 6 | 0.423 s | Killed | ⊕ |
| 3 | | AOR [135] | 6 | 0.436 s | Killed | ⊕ |
| 4 | | AOR [163] | 9 | 0.389 s | Killed | ⊕ |
| 5 | | AOR [183] | 9 | 0.451 s | Killed | ⊕ |
| 6 | | AOR [184] | 9 | 0.401 s | Killed | ⊕ |
| 7 | | AOR [220] | 12 | 0.424 s | Killed | ⊕ |
| 8 | | AOR [227] | 12 | 0.515 s | Killed | ⊕ |
| 9 | | AOR [227] | 12 | 0.423 s | Killed | ⊕ |

MutPy mutation report

⌚ 24.11.2025 17:18

Target

- `apps.company_search.views`

Tests [36]

- `apps.company_search.tests.test_views` [8.984 s]

Result summary

- **All Score** - 100.0%
- **Time** - 12506.7 s

Mutants [611]

- **Killed** - 501
- **Survived** - 0
- **Incomplete** - 110
- **Scored** - 0

| # | Module | Operator | Tests run | Duration | Result | Actions |
|---|--------|------------|-----------|----------|--------|---------|
| 1 | | AOD [976] | 31 | 3.013 s | Killed | ⊕ |
| 2 | | AOD [1168] | 31 | 1.893 s | Killed | ⊕ |
| 3 | | AOD [1777] | 31 | 1.62 s | Killed | ⊕ |
| 4 | | AOD [2082] | 31 | 1.524 s | Killed | ⊕ |
| 5 | | AOD [2113] | 31 | 1.712 s | Killed | ⊕ |
| 6 | | AOD [2114] | 31 | 1.466 s | Killed | ⊕ |
| 7 | | AOD [976] | 31 | 4.054 s | Killed | ⊕ |
| 8 | | AOR [1031] | 31 | 1.767 s | Killed | ⊕ |
| 9 | | AOR [1032] | 31 | 1.617 s | Killed | ⊕ |

