



# # Similarity Analysis

U235 Pro

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Secure3

# U235Pro\_AAVE\_Similarity\_Analysis

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## Purpose

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The primary objective of this analysis is to assess the code similarity between the **a sub-folder of the source repo** and the **target repo**.

Our engineering team has embarked on a detailed direct comparison of the code repositories. This examination aims to accurately quantify and understand the extent of similarity.

Our analysis result can be found in the **conclusion**.

## Code Repos

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### Source

- <https://github.com/U235-pro/contracts-internal/tree/main/contracts-internal>  
(<https://github.com/U235-pro/contracts-internal/tree/main/contracts-internal>)
  - commit hash: 707783347f9088596c7eb508a415c422d07f2d81

### Target

- <https://github.com/aave/aave-v3-core> (<https://github.com/aave/aave-v3-core>)
  - commit hash: 6d6fa53d360b43f492ff5b3c7033f95aee4f1335

A copy of the codes has also been cloned into `source_code/()` and `target_code/()` for reference. The `.git` has been removed for both.

## Conclusion

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Based on our comparison, we conclude that the **source** is a subset of the **target** with approximately 7156 loc reduction.

Prior security assessments on target repos can be a good reference. Readers of this analysis, based on your security requirements, should determine on their own whether or not to directly trust the prior or existing security assessments or audits on target repos.

# Methodology for Similarity Comparison

We utilized two tools for the similarity analysis:

- 1. `git diff --numstat` : <https://git-scm.com/docs/git-diff> (<https://git-scm.com/docs/git-diff>)
- 2. `cloc` : <https://github.com/AlDanial/cloc> (<https://github.com/AlDanial/cloc>)

## Comparison Detail

### git diff output

```
git diff source_code/contracts-internal/contracts-internal/ target_code/aave-v3-core/ --numstat | grep .sol > results/git_diff.txt
```

output: results/git\_diff.txt ()

### cloc output

```
cloc --not-match-f="(example|test|tests|mock|Mock)" --exclude-dir=mock,mocks,test,debug,template,open-zeppelin,lib,dependencies,interfaces --include-ext=sol --diff target_code/aave-v3-core source_code/contracts-internal/contracts-internal > results/cloc_diff_concise.txt
```

output: results/cloc\_diff\_concise.txt ()

```
github.com/AlDanial/cloc v 1.98 T=0.17 s (355.5 files/s, 65858.5 lines/s)
```

Language	files	blank	comment	code
Solidity				
same	0	0	0	0
modified	0	0	0	0
added	1	1	2	6
removed	58	1284	2482	7156
SUM:				
same	0	0	0	0
modified	0	0	0	0
added	1	1	2	6
removed	58	1284	2482	7156

We see about 7156 lines of code removed.

Get a more detailed result:

```
cloc --by-file --not-match-f="(example|test|tests|mock|Mock)" --exclude-dir=mock,mocks,test,debug,template,open-zeppelin,lib,dependencies,interfaces --include-ext=sol --diff target_code/aave-v3-core source_code/contracts-internal/contracts-internal > results/cloc_diff.txt
```

output: results/cloc\_diff.txt ()