

Algorithm Documentation: [Algorithm Name]

Your Name

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1 Overview

This document presents the [Algorithm Name] algorithm for solving [problem].

2 Algorithm Description

Algorithm 1 Algorithm Name

```
1: procedure ALGORITHMNAME(input)
2:   result  $\leftarrow$  0
3:   n  $\leftarrow$  length(input)
4:   for i  $\leftarrow$  1 to n do
5:     if condition then
6:       result  $\leftarrow$  result + input[i]
7:     else
8:       result  $\leftarrow$  result - input[i]
9:     end if
10:  end for
11:  return result
12: end procedure
```

2.1 Complexity Analysis

- **Time Complexity:** $O(n)$ where n is the size of input
- **Space Complexity:** $O(1)$ constant extra space

3 Example

3.1 Input

```
input = [1, 2, 3, 4, 5]
```

3.2 Output

```
result = 15
```