Tubes AI :

Dengan worst starting point :

Steepest ascent hill climbing

|  |  |  |
| --- | --- | --- |
| TC | plot | Final value |
| 1 |  | 13 |
| 2 |  | 3 |
| 3 |  | 12 |

SMHC

|  |  |  |
| --- | --- | --- |
| TC | plot | Final value |
| 1 |  | 13 |
| 2 |  | 3 |
| 3 |  | 12 |

SHC

|  |  |  |
| --- | --- | --- |
| TC | plot | Final value |
| 1 |  | 23 |
| 2 |  | 33 |
| 3 |  | 32 |

RRHC

|  |  |  |
| --- | --- | --- |
| TC | plot | Best val |
| 1 |  | 23 |
| 2 |  | 3 |
| 3 |  | 2 |

Hasil dari TC 3

|  |
| --- |
| Kontainer 1 (total: 10)    \* BRG009 (9)    \* BRG005 (1)  Kontainer 2 (total: 10)    \* BRG008 (8)    \* BRG001 (2)  Kontainer 3 (total: 10)    \* BRG013 (7)    \* BRG021 (3)  Kontainer 4 (total: 10)    \* BRG015 (6)    \* BRG003 (4)  Kontainer 5 (total: 9)    \* BRG017 (8)    \* BRG016 (1)  Kontainer 6 (total: 10)    \* BRG007 (6)    \* BRG019 (2)    \* BRG023 (2)  Kontainer 7 (total: 10)    \* BRG004 (7)    \* BRG012 (3)  Kontainer 8 (total: 10)    \* BRG022 (7)    \* BRG006 (3)  Kontainer 9 (total: 10)    \* BRG011 (5)    \* BRG002 (5)  Kontainer 10 (total: 9)    \* BRG018 (9)  Kontainer 11 (total: 10)    \* BRG024 (4)    \* BRG010 (2)    \* BRG014 (4)  Kontainer 12 (total: 10)    \* BRG020 (5)    \* BRG025 (5) |

Simulated annealing

Temperature 100, 200 Iterasi

|  |  |  |
| --- | --- | --- |
| TC | plot | Best val |
| 1 |  | 25 |
| 2 |  | 3 |
| 3 |  | 12 |

Pengaruh temperature

\*digunakan Test Case 3

Dilakukan 200 iterasi,

|  |  |  |  |
| --- | --- | --- | --- |
| T | Iter 1-5 | mean | std |
| 100 | 101, 57, 46, 23, 57 | 56.8 | 25.35 |
| 75 | 23, 34, 12, 12, 12 | 18.6 | 8.8 |
| 50 | 34, 33, 56, 23, 34 | 36 | 10.83 |
| 25 | 12, 22, 22, 22, 12 | 18 | 4.9 |

Genetic Algorithm

Variable tetap :

* Populasi : 10
* Iterasi : 10
* Fitness threshold : 10%
* Mutation rate : 10%
* Testcase 3

|  |  |  |
| --- | --- | --- |
| TC | plot | Best val |
| 1 |  | 3 |
| 2 |  | 3 |
| 3 |  | 12 |

Update Pada TC 1:

|  |
| --- |
| Kontainer 1 (total: 10)    \* BRG005 (1)    \* BRG009 (9)  Kontainer 2 (total: 10)    \* BRG017 (8)    \* BRG019 (2)  Kontainer 3 (total: 10)    \* BRG001 (2)    \* BRG008 (8)  Kontainer 4 (total: 10)    \* BRG016 (1)    \* BRG003 (4)    \* BRG002 (5)  Kontainer 5 (total: 10)    \* BRG006 (3)    \* BRG004 (7)  Kontainer 6 (total: 10)    \* BRG015 (6)    \* BRG014 (4)  Kontainer 7 (total: 8)    \* BRG007 (6)    \* BRG010 (2)  Kontainer 8 (total: 10)    \* BRG020 (5)    \* BRG011 (5)  Kontainer 9 (total: 9)    \* BRG018 (9)  Kontainer 10 (total: 10)    \* BRG012 (3)    \* BRG013 (7) |

Fitness over generation :

|  |  |  |
| --- | --- | --- |
| TC | plot | Best val |
| 1 | A graph with blue lines  AI-generated content may be incorrect. | 3 |
| 2 |  | 3 |
| 3 |  | 2 |

Pengaruh Populasi :

|  |  |  |  |
| --- | --- | --- | --- |
| P | Iterasi 1-5 | mean | std |
| 5 | 12, 2, 12, 12, 12 | 10 | 10 |
| 10 | 2, 12, 12, 12, 12 | 10 | 4 |
| 15 | 2, 12, 2, 12, 8 | 7.2 | 4.49 |
| 20 | 7, 8, 2, 11, 12 | 8 | 3.52 |

A graph with a red line

AI-generated content may be incorrect.

Koefisien korelasi = -0.798

Pengaruh mutation rate :

|  |  |  |  |
| --- | --- | --- | --- |
| M | Iterasi 1-5 | mean | std |
| 5 | 12, 12, 2, 12, 12 | 10 | 4 |
| 10 | 2, 12, 12, 12, 12 | 10 | 4 |
| 15 | 2, 2, 12, 2, 2 | 4 | 4 |
| 20 | 2, 2, 12, 12, 2 | 6 | 4.9 |

Koefisien korelasi = -0.775

A graph with red line and blue dots

AI-generated content may be incorrect.

Pengaruh Fitness threshold

|  |  |  |  |
| --- | --- | --- | --- |
| T | Iterasi 1-5 | mean | std |
| 5 | 2, 12, 2, 12, 2 | 6 | 4.9 |
| 10 | 2, 12, 12, 12, 12 | 10 | 4 |
| 15 | 12, 11, 12, 12, 2 | 9.80 | 3.92 |
| 20 | 2, 3, 2, 12, 12 | 6.2 | 4.75 |

A graph with red lines and blue dots

AI-generated content may be incorrect.

Koefisien korelasi r = 0.024

**Pengaruh algoritma inisial pada masing-masing algoritma**

Variable tetap :

* Populasi : 10
* Iterasi-genetic : 10
* Fitness threshold : 10%
* Mutation rate : 10%
* Testcase : 3
* Iterasi-HC : 100
* Iterasi Simulated Annealing : 200
* Simulated Annealing Temperature : 100

|  |  |  |
| --- | --- | --- |
| Algorima | Worst  (Final value) | First fit  (Final value) |
| SAHC | 12 | 12 |
| RRHC | 2 | 12 |
| Simulated Annealing | 12 | 113 |
| Genetic Algorithm | 2 | 2 |