# Performance Criterion Analysis

## Engineer 1

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 3. ]  
 [1. 1. 3. 3. 3. ]  
 [1. 0.33333333 1. 1. 1. ]  
 [1. 0.33333333 1. 1. 1. ]  
 [0.33333333 0.33333333 1. 1. 1. ]]

Weights:  
[0.2374051 0.35084587 0.1474002 0.1474002 0.11694862]

Max Eigenvalue: (5.19743350030492+0j)

Consistency Index (CI): (0.04935837507623009+0j)

Consistency Ratio (CR): (0.032687665613397414+0j)

Random Index (RI): 1.51

## Engineer 2

Pairwise Comparison Matrix:  
[[1. 5. 5. 1. 1. ]  
 [0.2 1. 1. 1. 3. ]  
 [0.2 1. 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]  
 [1. 0.33333333 1. 1. 1. ]]

Weights:  
[0.37816017 0.17414036 0.12096553 0.17343427 0.15329967]

Max Eigenvalue: (5.765873028706466+0j)

Consistency Index (CI): (0.19146825717661642+0j)

Consistency Ratio (CR): (0.12680017031564003+0j)

Random Index (RI): 1.51

## Engineer 3

Pairwise Comparison Matrix:  
[[1. 1. 3. 1. 1. ]  
 [1. 1. 3. 3. 7. ]  
 [0.33333333 0.33333333 1. 9. 7. ]  
 [1. 0.33333333 0.11111111 1. 3. ]  
 [1. 0.14285714 0.14285714 0.33333333 1. ]]

Weights:  
[0.23553508 0.32408143 0.27578221 0.10107928 0.06352199]

Max Eigenvalue: (6.587402872197778+0j)

Consistency Index (CI): (0.3968507180494445+0j)

Consistency Ratio (CR): (0.2628150450658573+0j)

Random Index (RI): 1.51

## Engineer 4

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 5

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 3. ]  
 [1. 1. 1. 1. 3. ]  
 [1. 1. 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]  
 [0.33333333 0.33333333 1. 1. 1. ]]

Weights:  
[0.24250128 0.24250128 0.19240265 0.19240265 0.13019213]

Max Eigenvalue: (5.197433500304924+0j)

Consistency Index (CI): (0.049358375076230976+0j)

Consistency Ratio (CR): (0.032687665613398+0j)

Random Index (RI): 1.51

## Engineer 6

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 7

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 8

Pairwise Comparison Matrix:  
[[1. 9. 1. 1. 1. ]  
 [0.11111111 1. 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]]

Weights:  
[0.34858246 0.12183116 0.1765288 0.1765288 0.1765288 ]

Max Eigenvalue: (5.664798197044089+0j)

Consistency Index (CI): (0.1661995492610222+0j)

Consistency Ratio (CR): (0.11006592666292862+0j)

Random Index (RI): 1.51

## Engineer 9

Pairwise Comparison Matrix:  
[[1. 3. 5. 1. 3. ]  
 [0.33333333 1. 5. 3. 1. ]  
 [0.2 0.2 1. 3. 5. ]  
 [1. 0.33333333 0.33333333 1. 5. ]  
 [0.33333333 1. 0.2 0.2 1. ]]

Weights:  
[0.34688054 0.25825714 0.16690931 0.15166814 0.07628487]

Max Eigenvalue: (6.736386262235435+0j)

Consistency Index (CI): (0.43409656555885867+0j)

Consistency Ratio (CR): (0.2874811692442773+0j)

Random Index (RI): 1.51

## Engineer 10

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 11

Pairwise Comparison Matrix:  
[[1. 3. 1. 1. 3. ]  
 [0.33333333 1. 1. 3. 3. ]  
 [1. 1. 1. 3. 1. ]  
 [1. 0.33333333 0.33333333 1. 3. ]  
 [0.33333333 0.33333333 1. 0.33333333 1. ]]

Weights:  
[0.28926623 0.22950638 0.22950638 0.15529893 0.09642208]

Max Eigenvalue: (5.710507244588569+0j)

Consistency Index (CI): (0.17762681114714218+0j)

Consistency Ratio (CR): (0.11763364976631933+0j)

Random Index (RI): 1.51

## Engineer 12

Pairwise Comparison Matrix:  
[[1. 1. 5. 5. 5. ]  
 [1. 1. 1. 1. 5. ]  
 [0.2 1. 1. 0.2 1. ]  
 [0.2 1. 5. 1. 1. ]  
 [0.2 0.2 1. 1. 1. ]]

Weights:  
[0.41695384 0.23082732 0.09068627 0.1781418 0.08339077]

Max Eigenvalue: (5.777318956869301+0j)

Consistency Index (CI): (0.19432973921732533+0j)

Consistency Ratio (CR): (0.12869519153465253+0j)

Random Index (RI): 1.51

## Engineer 13

Pairwise Comparison Matrix:  
[[1. 3. 3. 3. 5. ]  
 [0.33333333 1. 7. 9. 0.3333 ]  
 [0.33333333 0.14285714 1. 0.2 3. ]  
 [0.33333333 0.11111111 5. 1. 3. ]  
 [0.2 3.00030003 0.33333333 0.33333333 1. ]]

Weights:  
[0.32779872 0.29430156 0.08767869 0.14451002 0.145711 ]

Max Eigenvalue: (8.040984779168074+0j)

Consistency Index (CI): (0.7602461947920185+0j)

Consistency Ratio (CR): (0.5034743011867673+0j)

Random Index (RI): 1.51

## Engineer 14

Pairwise Comparison Matrix:  
[[1. 1. 3. 5. 3. ]  
 [1. 1. 7. 7. 1. ]  
 [0.33333333 0.14285714 1. 7. 1. ]  
 [0.2 0.14285714 0.14285714 1. 1. ]  
 [0.33333333 1. 1. 1. 1. ]]

Weights:  
[0.30154042 0.36848006 0.13869781 0.05519387 0.13608784]

Max Eigenvalue: (5.871009971187316+0j)

Consistency Index (CI): (0.21775249279682907+0j)

Consistency Ratio (CR): (0.14420694887207225+0j)

Random Index (RI): 1.51

## Engineer 15

Pairwise Comparison Matrix:  
[[1. 3. 3. 1. 1. ]  
 [0.33333333 1. 1. 1. 1. ]  
 [0.33333333 1. 1. 1. 3. ]  
 [1. 1. 1. 1. 3. ]  
 [1. 1. 0.33333333 0.33333333 1. ]]

Weights:  
[0.30374229 0.14473147 0.19211502 0.22886385 0.13054738]

Max Eigenvalue: (5.510240196957541+0j)

Consistency Index (CI): (0.12756004923938535+0j)

Consistency Ratio (CR): (0.08447685380091746+0j)

Random Index (RI): 1.51

## Engineer 16

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1. ]  
 [1. 1. 0.1429 1. 1. ]  
 [1. 6.99790063 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]]

Weights:  
[0.18154432 0.1310856 0.32428144 0.18154432 0.18154432]

Max Eigenvalue: (5.5082967747939735+0j)

Consistency Index (CI): (0.12707419369849338+0j)

Consistency Ratio (CR): (0.08415509516456515+0j)

Random Index (RI): 1.51

## Engineer 17

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 18

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 19

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 20

Pairwise Comparison Matrix:  
[[1. 5. 5. 5. 1. ]  
 [0.2 1. 1. 5. 5. ]  
 [0.2 1. 1. 5. 5. ]  
 [0.2 0.2 0.2 1. 5. ]  
 [1. 0.2 0.2 0.2 1. ]]

Weights:  
[0.4210141 0.19779698 0.19779698 0.09766079 0.08573115]

Max Eigenvalue: (7.06156631582741+0j)

Consistency Index (CI): (0.5153915789568524+0j)

Consistency Ratio (CR): (0.3413189264614917+0j)

Random Index (RI): 1.51

## Engineer 21

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 22

Pairwise Comparison Matrix:  
[[1. 9. 1. 0.1111 0.1429 ]  
 [0.11111111 1. 9. 0.1111 0.3333 ]  
 [1. 0.11111111 1. 1. 9. ]  
 [9.00090009 9.00090009 1. 1. 9. ]  
 [6.99790063 3.00030003 0.11111111 0.11111111 1. ]]

Weights:  
[0.14816953 0.15197736 0.17063965 0.38540706 0.14380639]

Max Eigenvalue: (11.810620335051754+0j)

Consistency Index (CI): (1.7026550837629384+0j)

Consistency Ratio (CR): (1.1275861481873766+0j)

Random Index (RI): 1.51

## Engineer 23

Pairwise Comparison Matrix:  
[[1. 1. 3. 1. 1. ]  
 [1. 1. 3. 3. 1. ]  
 [0.33333333 0.33333333 1. 1. 1. ]  
 [1. 0.33333333 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]]

Weights:  
[0.23752132 0.29588766 0.12286547 0.15305732 0.19066824]

Max Eigenvalue: (5.244712090268367+0j)

Consistency Index (CI): (0.061178022567091705+0j)

Consistency Ratio (CR): (0.04051524673317332+0j)

Random Index (RI): 1.51

## Engineer 24

Pairwise Comparison Matrix:  
[[1. 1. 3. 1. 1. ]  
 [1. 1. 1. 1. 1. ]  
 [0.33333333 1. 1. 3. 1. ]  
 [1. 1. 0.33333333 1. 1. ]  
 [1. 1. 1. 1. 1. ]]

Weights:  
[0.26207462 0.18439531 0.21063255 0.15850221 0.18439531]

Max Eigenvalue: (5.4231314030900295+0j)

Consistency Index (CI): (0.10578285077250738+0j)

Consistency Ratio (CR): (0.07005486806126317+0j)

Random Index (RI): 1.51

## Engineer 25

Pairwise Comparison Matrix:  
[[1. 1. 3. 3. 3. ]  
 [1. 1. 1. 1. 1. ]  
 [0.33333333 1. 1. 1. 3. ]  
 [0.33333333 1. 1. 1. 3. ]  
 [0.33333333 1. 0.33333333 0.33333333 1. ]]

Weights:  
[0.35732582 0.18693735 0.17896967 0.17896967 0.0977975 ]

Max Eigenvalue: (5.3493858127214455+0j)

Consistency Index (CI): (0.08734645318036138+0j)

Consistency Ratio (CR): (0.05784533323202741+0j)

Random Index (RI): 1.51

## Engineer 26

Pairwise Comparison Matrix:  
[[1. 5. 3. 5. 5. ]  
 [0.2 1. 3. 5. 1. ]  
 [0.33333333 0.33333333 1. 5. 1. ]  
 [0.2 0.2 0.2 1. 3. ]  
 [0.2 1. 1. 0.33333333 1. ]]

Weights:  
[0.4653795 0.20759671 0.14700366 0.08679023 0.09322991]

Max Eigenvalue: (6.1121616309693785+0j)

Consistency Index (CI): (0.2780404077423446+0j)

Consistency Ratio (CR): (0.18413272035916864+0j)

Random Index (RI): 1.51

## Engineer 27

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1. ]  
 [1. 1. 3. 1. 1. ]  
 [1. 0.33333333 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]]

Weights:  
[0.19414572 0.25663329 0.16092955 0.19414572 0.19414572]

Max Eigenvalue: (5.1507702431575435+0j)

Consistency Index (CI): (0.037692560789385876+0j)

Consistency Ratio (CR): (0.02496196078767277+0j)

Random Index (RI): 1.51

## Engineer 28

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 29

Pairwise Comparison Matrix:  
[[1. 3. 3. 3. 3. ]  
 [0.33333333 1. 1. 3. 3. ]  
 [0.33333333 1. 1. 3. 3. ]  
 [0.33333333 0.33333333 0.33333333 1. 5. ]  
 [0.33333333 0.33333333 0.33333333 0.2 1. ]]

Weights:  
[0.3980207 0.20326635 0.20326635 0.13058391 0.06486269]

Max Eigenvalue: (5.5372964906614595+0j)

Consistency Index (CI): (0.13432412266536486+0j)

Consistency Ratio (CR): (0.08895637262606945+0j)

Random Index (RI): 1.51

## Engineer 30

Pairwise Comparison Matrix:  
[[1. 1. 3. 1. 1. ]  
 [1. 1. 3. 1. 1. ]  
 [0.33333333 0.33333333 1. 0.3333 0.3333 ]  
 [1. 1. 3.00030003 1. 1. ]  
 [1. 1. 3.00030003 1. 1. ]]

Weights:  
[0.23076781 0.23076781 0.07691953 0.23077243 0.23077243]

Max Eigenvalue: (5.000000001600162+0j)

Consistency Index (CI): (4.0004044521424476e-10+0j)

Consistency Ratio (CR): (2.649274471617515e-10+0j)

Random Index (RI): 1.51

## Engineer 31

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 32

Pairwise Comparison Matrix:  
[[1. 0.1111 0.1111 0.1111 0.1111 ]  
 [9.00090009 1. 0.1111 0.1111 0.1429 ]  
 [9.00090009 9.00090009 1. 0.1429 0.1429 ]  
 [9.00090009 9.00090009 6.99790063 1. 0.1429 ]  
 [9.00090009 6.99790063 6.99790063 6.99790063 1. ]]

Weights:  
[0.0185469 0.04897174 0.12304515 0.26311023 0.54632598]

Max Eigenvalue: (6.879118503146285+0j)

Consistency Index (CI): (0.4697796257865712+0j)

Consistency Ratio (CR): (0.3111123349579942+0j)

Random Index (RI): 1.51

## Engineer 33

Pairwise Comparison Matrix:  
[[1. 1. 3. 1. 3. ]  
 [1. 1. 3. 1. 1. ]  
 [0.33333333 0.33333333 1. 1. 1. ]  
 [1. 1. 1. 1. 3. ]  
 [0.33333333 1. 1. 0.33333333 1. ]]

Weights:  
[0.28202491 0.23536814 0.1236194 0.23536814 0.1236194 ]

Max Eigenvalue: (5.299097799638477+0j)

Consistency Index (CI): (0.07477444990961923+0j)

Consistency Ratio (CR): (0.04951950325140347+0j)

Random Index (RI): 1.51

## Engineer 34

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]  
 [1. 1. 1. 1. 1.]]

Weights:  
[0.2 0.2 0.2 0.2 0.2]

Max Eigenvalue: 4.999999999999999

Consistency Index (CI): -2.220446049250313e-16

Consistency Ratio (CR): -1.4704940723512008e-16

Random Index (RI): 1.51

## Engineer 35

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 3. ]  
 [1. 1. 1. 1. 3. ]  
 [1. 1. 1. 1. 1. ]  
 [1. 1. 1. 1. 1. ]  
 [0.33333333 0.33333333 1. 1. 1. ]]

Weights:  
[0.24250128 0.24250128 0.19240265 0.19240265 0.13019213]

Max Eigenvalue: (5.197433500304924+0j)

Consistency Index (CI): (0.049358375076230976+0j)

Consistency Ratio (CR): (0.032687665613398+0j)

Random Index (RI): 1.51

## Aggregate Results

Aggregate Pairwise Comparison Matrix:  
[[1. 1.10024348 1.39704636 1.10024348 1.33188404]  
 [0.90888973 1. 1.16676739 1.1540728 1.21053572]  
 [0.71579586 0.85706886 1. 1.04892036 1.1002387 ]  
 [0.90888973 0.86649646 0.95336123 1. 1.23772228]  
 [0.75081612 0.82608054 0.90889368 0.80793569 1. ]]

Aggregate Weights:  
[0.23387833 0.2147839 0.18560028 0.19603815 0.16969934]

Aggregate Max Eigenvalue: (5.007709034238857+0j)

Aggregate Consistency Index (CI): (0.0019272585597143177+0j)

Aggregate Consistency Ratio (CR): (0.001276330171996237+0j)

Aggregate Random Index (RI): 1.51