# Criteria Analysis

## Engineer 1

Pairwise Comparison Matrix:  
[[1. 1. 3. 1. ]  
 [1. 1. 3. 1. ]  
 [0.333 0.333 1. 1. ]  
 [1. 1. 1. 1. ]]

Weights:  
[0.309, 0.309, 0.142, 0.241]

Max Eigenvalue: 4.155

Consistency Index (CI): 0.052

Consistency Ratio (CR): 0.057

Random Index (RI): 0.9

## Engineer 2

Pairwise Comparison Matrix:  
[[1. 3. 3. 5. ]  
 [0.333 1. 5. 3. ]  
 [0.333 0.2 1. 5. ]  
 [0.2 0.333 0.2 1. ]]

Weights:  
[0.476, 0.309, 0.151, 0.064]

Max Eigenvalue: 4.575

Consistency Index (CI): 0.192

Consistency Ratio (CR): 0.213

Random Index (RI): 0.9

## Engineer 3

Pairwise Comparison Matrix:  
[[1. 1. 3. 3. ]  
 [1. 1. 3. 5. ]  
 [0.333 0.333 1. 7. ]  
 [0.333 0.2 0.143 1. ]]

Weights:  
[0.35, 0.38, 0.205, 0.065]

Max Eigenvalue: 4.405

Consistency Index (CI): 0.135

Consistency Ratio (CR): 0.15

Random Index (RI): 0.9

## Engineer 4

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 5

Pairwise Comparison Matrix:  
[[1. 1. 3. 1. ]  
 [1. 1. 3. 1. ]  
 [0.333 0.333 1. 0.333]  
 [1. 1. 3. 1. ]]

Weights:  
[0.3, 0.3, 0.1, 0.3]

Max Eigenvalue: 4.0

Consistency Index (CI): 0.0

Consistency Ratio (CR): 0.0

Random Index (RI): 0.9

## Engineer 6

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 7

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

Weights:  
[0.378, 0.23, 0.161, 0.23]

Max Eigenvalue: 4.34

Consistency Index (CI): 0.113

Consistency Ratio (CR): 0.126

Random Index (RI): 0.9

## Engineer 8

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 9

Pairwise Comparison Matrix:  
[[1. 1. 3. 5. ]  
 [1. 1. 5. 3. ]  
 [0.333 0.2 1. 5. ]  
 [0.2 0.333 0.2 1. ]]

Weights:  
[0.363, 0.405, 0.162, 0.07]

Max Eigenvalue: 4.417

Consistency Index (CI): 0.139

Consistency Ratio (CR): 0.155

Random Index (RI): 0.9

## Engineer 10

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 11

Pairwise Comparison Matrix:  
[[1. 1. 1. 5. ]  
 [1. 1. 1. 1. ]  
 [1. 1. 1. 3. ]  
 [0.2 1. 0.333 1. ]]

Weights:  
[0.35, 0.235, 0.292, 0.123]

Max Eigenvalue: 4.264

Consistency Index (CI): 0.088

Consistency Ratio (CR): 0.098

Random Index (RI): 0.9

## Engineer 12

Pairwise Comparison Matrix:  
[[1. 1. 0.143 1. ]  
 [1. 1. 0.2 5. ]  
 [6.998 5. 1. 5. ]  
 [1. 0.2 0.2 1. ]]

Weights:  
[0.107, 0.189, 0.624, 0.08]

Max Eigenvalue: 4.354

Consistency Index (CI): 0.118

Consistency Ratio (CR): 0.131

Random Index (RI): 0.9

## Engineer 13

Pairwise Comparison Matrix:  
[[1. 5. 3. 3. ]  
 [0.2 1. 5. 3. ]  
 [0.333 0.2 1. 7. ]  
 [0.333 0.333 0.143 1. ]]

Weights:  
[0.495, 0.272, 0.166, 0.067]

Max Eigenvalue: 5.157

Consistency Index (CI): 0.386

Consistency Ratio (CR): 0.429

Random Index (RI): 0.9

## Engineer 14

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

Weights:  
[0.23, 0.378, 0.161, 0.23]

Max Eigenvalue: 4.34

Consistency Index (CI): 0.113

Consistency Ratio (CR): 0.126

Random Index (RI): 0.9

## Engineer 15

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. ]  
 [1. 1. 1. 3. ]  
 [1. 1. 1. 3. ]  
 [1. 0.333 0.333 1. ]]

Weights:  
[0.241, 0.309, 0.309, 0.142]

Max Eigenvalue: 4.155

Consistency Index (CI): 0.052

Consistency Ratio (CR): 0.057

Random Index (RI): 0.9

## Engineer 16

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

Weights:  
[0.378, 0.23, 0.23, 0.161]

Max Eigenvalue: 4.34

Consistency Index (CI): 0.113

Consistency Ratio (CR): 0.126

Random Index (RI): 0.9

## Engineer 17

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 18

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 19

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 20

Pairwise Comparison Matrix:  
[[1. 5. 1. 1. ]  
 [0.2 1. 1. 1. ]  
 [1. 1. 1. 3. ]  
 [1. 1. 0.333 1. ]]

Weights:  
[0.363, 0.158, 0.302, 0.178]

Max Eigenvalue: 4.496

Consistency Index (CI): 0.165

Consistency Ratio (CR): 0.184

Random Index (RI): 0.9

## Engineer 21

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 22

Pairwise Comparison Matrix:  
[[1. 0.111 0.143 0.111]  
 [9.001 1. 9. 0.143]  
 [6.998 0.111 1. 0.143]  
 [9.001 6.998 6.998 1. ]]

Weights:  
[0.027, 0.256, 0.077, 0.639]

Max Eigenvalue: 5.034

Consistency Index (CI): 0.345

Consistency Ratio (CR): 0.383

Random Index (RI): 0.9

## Engineer 23

Pairwise Comparison Matrix:  
[[1. 3. 3. 5. ]  
 [0.333 1. 5. 5. ]  
 [0.333 0.2 1. 3. ]  
 [0.2 0.2 0.333 1. ]]

Weights:  
[0.492, 0.324, 0.123, 0.061]

Max Eigenvalue: 4.347

Consistency Index (CI): 0.116

Consistency Ratio (CR): 0.128

Random Index (RI): 0.9

## Engineer 24

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 25

Pairwise Comparison Matrix:  
[[1. 1. 3. 1. ]  
 [1. 1. 1. 3. ]  
 [0.333 1. 1. 1. ]  
 [1. 0.333 1. 1. ]]

Weights:  
[0.317, 0.317, 0.183, 0.183]

Max Eigenvalue: 4.309

Consistency Index (CI): 0.103

Consistency Ratio (CR): 0.115

Random Index (RI): 0.9

## Engineer 26

Pairwise Comparison Matrix:  
[[1. 3. 3. 5. ]  
 [0.333 1. 3. 5. ]  
 [0.333 0.333 1. 5. ]  
 [0.2 0.2 0.2 1. ]]

Weights:  
[0.494, 0.285, 0.165, 0.057]

Max Eigenvalue: 4.309

Consistency Index (CI): 0.103

Consistency Ratio (CR): 0.115

Random Index (RI): 0.9

## Engineer 27

Pairwise Comparison Matrix:  
[[1. 3. 3. 1. ]  
 [0.333 1. 1. 1. ]  
 [0.333 1. 1. 1. ]  
 [1. 1. 1. 1. ]]

Weights:  
[0.409, 0.175, 0.175, 0.241]

Max Eigenvalue: 4.155

Consistency Index (CI): 0.052

Consistency Ratio (CR): 0.057

Random Index (RI): 0.9

## Engineer 28

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 29

Pairwise Comparison Matrix:  
[[1. 3. 1. 1. ]  
 [0.333 1. 3. 3. ]  
 [1. 0.333 1. 3. ]  
 [1. 0.333 0.333 1. ]]

Weights:  
[0.336, 0.309, 0.221, 0.134]

Max Eigenvalue: 4.814

Consistency Index (CI): 0.271

Consistency Ratio (CR): 0.301

Random Index (RI): 0.9

## Engineer 30

Pairwise Comparison Matrix:  
[[1. 3. 1. 1. ]  
 [0.333 1. 1. 1. ]  
 [1. 1. 1. 1. ]  
 [1. 1. 1. 1. ]]

Weights:  
[0.331, 0.188, 0.241, 0.241]

Max Eigenvalue: 4.155

Consistency Index (CI): 0.052

Consistency Ratio (CR): 0.057

Random Index (RI): 0.9

## Engineer 31

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 32

Pairwise Comparison Matrix:  
[[1. 0.143 1. 0.111]  
 [6.998 1. 0.111 0.111]  
 [1. 9.001 1. 0.111]  
 [9.001 9.001 9.001 1. ]]

Weights:  
[0.057, 0.099, 0.202, 0.642]

Max Eigenvalue: 6.021

Consistency Index (CI): 0.674

Consistency Ratio (CR): 0.748

Random Index (RI): 0.9

## Engineer 33

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 34

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

Weights:  
[0.25, 0.25, 0.25, 0.25]

Max Eigenvalue: 4.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 0.9

## Engineer 35

Pairwise Comparison Matrix:  
[[1. 1. 3. 1. ]  
 [1. 1. 3. 3. ]  
 [0.333 0.333 1. 7. ]  
 [1. 0.333 0.143 1. ]]

Weights:  
[0.298, 0.343, 0.248, 0.112]

Max Eigenvalue: 5.015

Consistency Index (CI): 0.338

Consistency Ratio (CR): 0.376

Random Index (RI): 0.9

## Aggregate Results

Aggregate Pairwise Comparison Matrix:  
[[1. 1.123 1.189 1.088]  
 [0.891 1. 1.123 1.06 ]  
 [0.841 0.891 1. 1.06 ]  
 [0.919 0.944 0.944 1. ]]

Aggregate Weights:  
[0.274, 0.253, 0.236, 0.237]

Aggregate Max Eigenvalue: 4.003

Aggregate Consistency Index (CI): 0.001

Aggregate Consistency Ratio (CR): 0.001

Aggregate Random Index (RI): 0.9