# Criteria Analysis

## Engineer 1

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

Weights:  
[0.309, 0.241, 0.309, 0.142]

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. 1. 1. ]  
 [0.333 1. 1. 5. ]  
 [1. 1. 1. 1. ]  
 [1. 0.2 1. 1. ]]

Weights:  
[0.334, 0.297, 0.21, 0.16]

Max Eigenvalue: 4.773

Consistency Index (CI): 0.258

Consistency Ratio (CR): 0.286

Random Index (RI): 0.9

## Engineer 3

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

Weights:  
[0.35, 0.458, 0.145, 0.047]

Max Eigenvalue: 4.491

Consistency Index (CI): 0.164

Consistency Ratio (CR): 0.182

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. 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 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. 3. 3. 1. ]  
 [0.333 1. 1. 3. ]  
 [0.333 1. 1. 1. ]  
 [1. 0.333 1. 1. ]]

Weights:  
[0.405, 0.246, 0.163, 0.186]

Max Eigenvalue: 4.486

Consistency Index (CI): 0.162

Consistency Ratio (CR): 0.18

Random Index (RI): 0.9

## Engineer 8

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

Weights:  
[0.086, 0.291, 0.333, 0.291]

Max Eigenvalue: 4.033

Consistency Index (CI): 0.011

Consistency Ratio (CR): 0.012

Random Index (RI): 0.9

## Engineer 9

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

Weights:  
[0.446, 0.308, 0.187, 0.058]

Max Eigenvalue: 5.266

Consistency Index (CI): 0.422

Consistency Ratio (CR): 0.469

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. 3. 1. ]  
 [1. 1. 3. 1. ]  
 [0.333 0.333 1. 3. ]  
 [1. 1. 0.333 1. ]]

Weights:  
[0.304, 0.304, 0.207, 0.185]

Max Eigenvalue: 4.656

Consistency Index (CI): 0.219

Consistency Ratio (CR): 0.243

Random Index (RI): 0.9

## Engineer 12

Pairwise Comparison Matrix:  
[[1. 5. 0.111 9. ]  
 [0.2 1. 1. 0.143]  
 [9.001 1. 1. 1. ]  
 [0.111 6.998 1. 1. ]]

Weights:  
[0.299, 0.083, 0.454, 0.164]

Max Eigenvalue: 7.488

Consistency Index (CI): 1.163

Consistency Ratio (CR): 1.292

Random Index (RI): 0.9

## Engineer 13

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

Weights:  
[0.431, 0.36, 0.152, 0.058]

Max Eigenvalue: 4.264

Consistency Index (CI): 0.088

Consistency Ratio (CR): 0.098

Random Index (RI): 0.9

## Engineer 14

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

Weights:  
[0.348, 0.345, 0.149, 0.158]

Max Eigenvalue: 4.864

Consistency Index (CI): 0.288

Consistency Ratio (CR): 0.32

Random Index (RI): 0.9

## Engineer 15

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 16

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 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. 5. 5. ]  
 [0.2 1. 5. 5. ]  
 [0.2 0.2 1. 5. ]  
 [0.2 0.2 0.2 1. ]]

Weights:  
[0.576, 0.258, 0.115, 0.052]

Max Eigenvalue: 4.683

Consistency Index (CI): 0.228

Consistency Ratio (CR): 0.253

Random Index (RI): 0.9

## Engineer 21

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

Weights:  
[0.425, 0.222, 0.25, 0.102]

Max Eigenvalue: 4.496

Consistency Index (CI): 0.165

Consistency Ratio (CR): 0.184

Random Index (RI): 0.9

## Engineer 22

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

Weights:  
[0.032, 0.439, 0.439, 0.091]

Max Eigenvalue: 4.506

Consistency Index (CI): 0.169

Consistency Ratio (CR): 0.188

Random Index (RI): 0.9

## Engineer 23

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

Weights:  
[0.368, 0.368, 0.169, 0.096]

Max Eigenvalue: 4.155

Consistency Index (CI): 0.052

Consistency Ratio (CR): 0.057

Random Index (RI): 0.9

## Engineer 24

Pairwise Comparison Matrix:  
[[1. 1. 1. 3. ]  
 [1. 1. 3. 1. ]  
 [1. 0.333 1. 1. ]  
 [0.333 1. 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 25

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

Weights:  
[0.232, 0.402, 0.232, 0.134]

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. 5. 3. 5. ]  
 [0.2 1. 5. 5. ]  
 [0.333 0.2 1. 5. ]  
 [0.2 0.2 0.2 1. ]]

Weights:  
[0.543, 0.274, 0.132, 0.051]

Max Eigenvalue: 4.725

Consistency Index (CI): 0.242

Consistency Ratio (CR): 0.268

Random Index (RI): 0.9

## Engineer 27

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 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. 3. 1. ]  
 [0.333 1. 3. 3. ]  
 [0.333 0.333 1. 3. ]  
 [1. 0.333 0.333 1. ]]

Weights:  
[0.398, 0.285, 0.173, 0.144]

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. 1. 0.333 1. ]  
 [1. 1. 1. 1. ]  
 [3. 1. 1. 1. ]  
 [1. 1. 1. 1. ]]

Weights:  
[0.188, 0.241, 0.331, 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. 0.333 0.333 0.333]  
 [3. 1. 0.111 0.111]  
 [3. 9.001 1. 0.111]  
 [3. 9.001 9.001 1. ]]

Weights:  
[0.071, 0.071, 0.214, 0.643]

Max Eigenvalue: 5.333

Consistency Index (CI): 0.444

Consistency Ratio (CR): 0.494

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. 1. 1. ]  
 [1. 1. 1. 1. ]  
 [1. 1. 1. 3. ]  
 [1. 1. 0.333 1. ]]

Weights:  
[0.241, 0.241, 0.331, 0.188]

Max Eigenvalue: 4.155

Consistency Index (CI): 0.052

Consistency Ratio (CR): 0.057

Random Index (RI): 0.9

## Aggregate Results

Aggregate Pairwise Comparison Matrix:  
[[1. 0.944 1.06 1.153]  
 [1.06 1. 1.189 1.153]  
 [0.944 0.841 1. 1.295]  
 [0.867 0.867 0.772 1. ]]

Aggregate Weights:  
[0.258, 0.274, 0.251, 0.218]

Aggregate Max Eigenvalue: 4.008

Aggregate Consistency Index (CI): 0.003

Aggregate Consistency Ratio (CR): 0.003

Aggregate Random Index (RI): 0.9