# Criteria Analysis

## Engineer 1

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

Weights:  
[0.194, 0.194, 0.194, 0.257, 0.161]

Max Eigenvalue: 5.151

Consistency Index (CI): 0.038

Consistency Ratio (CR): 0.034

Random Index (RI): 1.12

## Engineer 2

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

Weights:  
[0.411, 0.261, 0.137, 0.104, 0.087]

Max Eigenvalue: 5.299

Consistency Index (CI): 0.075

Consistency Ratio (CR): 0.067

Random Index (RI): 1.12

## Engineer 3

Pairwise Comparison Matrix:  
[[1. 1. 3. 3. 1. ]  
 [1. 1. 1. 7. 9. ]  
 [0.333 1. 1. 3. 3. ]  
 [0.333 0.143 0.333 1. 3. ]  
 [1. 0.111 0.333 0.333 1. ]]

Weights:  
[0.264, 0.368, 0.196, 0.091, 0.081]

Max Eigenvalue: 5.952

Consistency Index (CI): 0.238

Consistency Ratio (CR): 0.213

Random Index (RI): 1.12

## 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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Engineer 5

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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## 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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Engineer 7

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

Weights:  
[0.194, 0.257, 0.194, 0.161, 0.194]

Max Eigenvalue: 5.151

Consistency Index (CI): 0.038

Consistency Ratio (CR): 0.034

Random Index (RI): 1.12

## Engineer 8

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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Engineer 9

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

Weights:  
[0.479, 0.173, 0.155, 0.116, 0.076]

Max Eigenvalue: 5.717

Consistency Index (CI): 0.179

Consistency Ratio (CR): 0.16

Random Index (RI): 1.12

## 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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Engineer 11

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

Weights:  
[0.359, 0.189, 0.189, 0.144, 0.12]

Max Eigenvalue: 5.299

Consistency Index (CI): 0.075

Consistency Ratio (CR): 0.067

Random Index (RI): 1.12

## Engineer 12

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

Weights:  
[0.071, 0.122, 0.12, 0.348, 0.339]

Max Eigenvalue: 5.911

Consistency Index (CI): 0.228

Consistency Ratio (CR): 0.203

Random Index (RI): 1.12

## Engineer 13

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

Weights:  
[0.444, 0.337, 0.113, 0.064, 0.042]

Max Eigenvalue: 5.744

Consistency Index (CI): 0.186

Consistency Ratio (CR): 0.166

Random Index (RI): 1.12

## Engineer 14

Pairwise Comparison Matrix:  
[[1. 1. 9. 1. 1. ]  
 [1. 1. 5. 1. 3. ]  
 [0.111 0.2 1. 1. 3. ]  
 [1. 1. 1. 1. 3. ]  
 [1. 0.333 0.333 0.333 1. ]]

Weights:  
[0.315, 0.273, 0.115, 0.197, 0.1]

Max Eigenvalue: 6.095

Consistency Index (CI): 0.274

Consistency Ratio (CR): 0.244

Random Index (RI): 1.12

## Engineer 15

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

Weights:  
[0.192, 0.192, 0.31, 0.153, 0.153]

Max Eigenvalue: 5.197

Consistency Index (CI): 0.049

Consistency Ratio (CR): 0.044

Random Index (RI): 1.12

## Engineer 16

Pairwise Comparison Matrix:  
[[1. 1. 1. 1. 0.143]  
 [1. 1. 7. 7. 5. ]  
 [1. 0.143 1. 1. 1. ]  
 [1. 0.143 1. 1. 1. ]  
 [6.998 0.2 1. 1. 1. ]]

Weights:  
[0.127, 0.468, 0.094, 0.094, 0.217]

Max Eigenvalue: 6.393

Consistency Index (CI): 0.348

Consistency Ratio (CR): 0.311

Random Index (RI): 1.12

## 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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## 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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## 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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Engineer 20

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

Weights:  
[0.272, 0.339, 0.227, 0.124, 0.038]

Max Eigenvalue: 6.068

Consistency Index (CI): 0.267

Consistency Ratio (CR): 0.238

Random Index (RI): 1.12

## Engineer 21

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

Weights:  
[0.355, 0.28, 0.202, 0.092, 0.071]

Max Eigenvalue: 5.393

Consistency Index (CI): 0.098

Consistency Ratio (CR): 0.088

Random Index (RI): 1.12

## Engineer 22

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

Weights:  
[0.046, 0.074, 0.539, 0.115, 0.226]

Max Eigenvalue: 6.996

Consistency Index (CI): 0.499

Consistency Ratio (CR): 0.446

Random Index (RI): 1.12

## Engineer 23

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

Weights:  
[0.289, 0.4, 0.18, 0.08, 0.052]

Max Eigenvalue: 5.619

Consistency Index (CI): 0.155

Consistency Ratio (CR): 0.138

Random Index (RI): 1.12

## Engineer 24

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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Engineer 25

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

Weights:  
[0.304, 0.145, 0.192, 0.229, 0.131]

Max Eigenvalue: 5.51

Consistency Index (CI): 0.128

Consistency Ratio (CR): 0.114

Random Index (RI): 1.12

## Engineer 26

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

Weights:  
[0.411, 0.268, 0.175, 0.079, 0.066]

Max Eigenvalue: 5.685

Consistency Index (CI): 0.171

Consistency Ratio (CR): 0.153

Random Index (RI): 1.12

## Engineer 27

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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## 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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Engineer 29

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

Weights:  
[0.346, 0.296, 0.163, 0.132, 0.063]

Max Eigenvalue: 5.916

Consistency Index (CI): 0.229

Consistency Ratio (CR): 0.205

Random Index (RI): 1.12

## Engineer 30

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

Weights:  
[0.189, 0.359, 0.189, 0.12, 0.144]

Max Eigenvalue: 5.299

Consistency Index (CI): 0.075

Consistency Ratio (CR): 0.067

Random Index (RI): 1.12

## 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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Engineer 32

Pairwise Comparison Matrix:  
[[1. 3. 3. 3. 0.111]  
 [0.333 1. 0.111 0.111 0.111]  
 [0.333 9.001 1. 0.111 0.111]  
 [0.333 9.001 9.001 1. 0.111]  
 [9.001 9.001 9.001 9.001 1. ]]

Weights:  
[0.142, 0.025, 0.062, 0.158, 0.613]

Max Eigenvalue: 6.679

Consistency Index (CI): 0.42

Consistency Ratio (CR): 0.375

Random Index (RI): 1.12

## Engineer 33

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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## 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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Engineer 35

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: 5.0

Consistency Index (CI): -0.0

Consistency Ratio (CR): -0.0

Random Index (RI): 1.12

## Aggregate Results

Aggregate Pairwise Comparison Matrix:  
[[1. 1.051 1.162 1.189 1.162]  
 [0.951 1. 1.105 1.25 1.162]  
 [0.861 0.905 1. 1.162 1.221]  
 [0.841 0.8 0.861 1. 1.105]  
 [0.861 0.861 0.819 0.905 1. ]]

Aggregate Weights:  
[0.221, 0.217, 0.203, 0.182, 0.177]

Aggregate Max Eigenvalue: 5.006

Aggregate Consistency Index (CI): 0.001

Aggregate Consistency Ratio (CR): 0.001

Aggregate Random Index (RI): 1.12