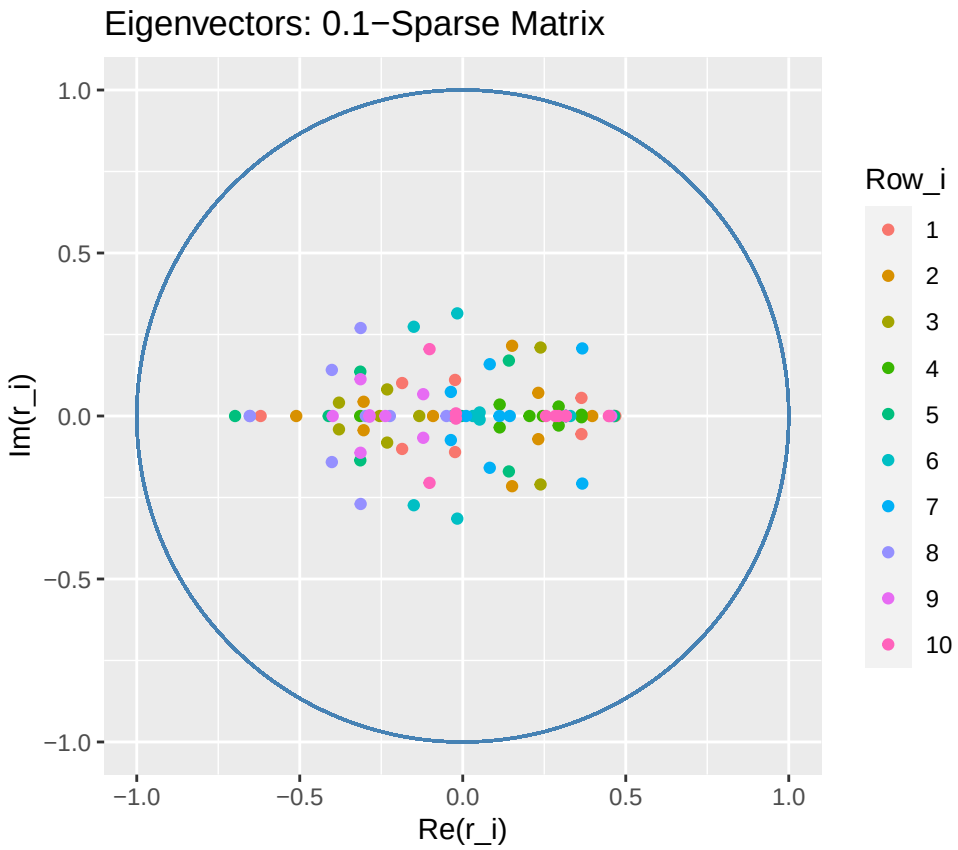
Sparsity Analysis

Ali Taqi

```
M_vec <- c(10,25,50)
p_vec <- c(0.1,0.5,0.8)
c(M1,M2,M3) %<-% M_vec
c(p1,p2,p3) %<-% p_vec
# Generate and concatenate matrices
P_vec1 <- matrix(c(rand_M_erdos(M1,p1),
                   rand_M_erdos(M1,p2),
                   rand_M_erdos(M1,p3)),
                 nrow = M_vec[1])
P_vec2 <- matrix(c(rand_M_erdos(M2,p1),
                   rand_M_erdos(M2,p2),
                   rand_M_erdos(M2,p3)),
                 nrow = M_vec[2])
P_vec3 <- matrix(c(rand_M_erdos(M3,p1),
                   rand_M_erdos(M3,p2),
                   rand_M_erdos(M3,p3)),
                 nrow = M_vec[3])
```


Eigenvectors: 0.1−Sparse Matrix
1.0
0.5
0.0
−0.5
−1.0
Im(r_i)
−1.0
−0.5
0.0
0.5
1.0
Re(r_i)
Row_i
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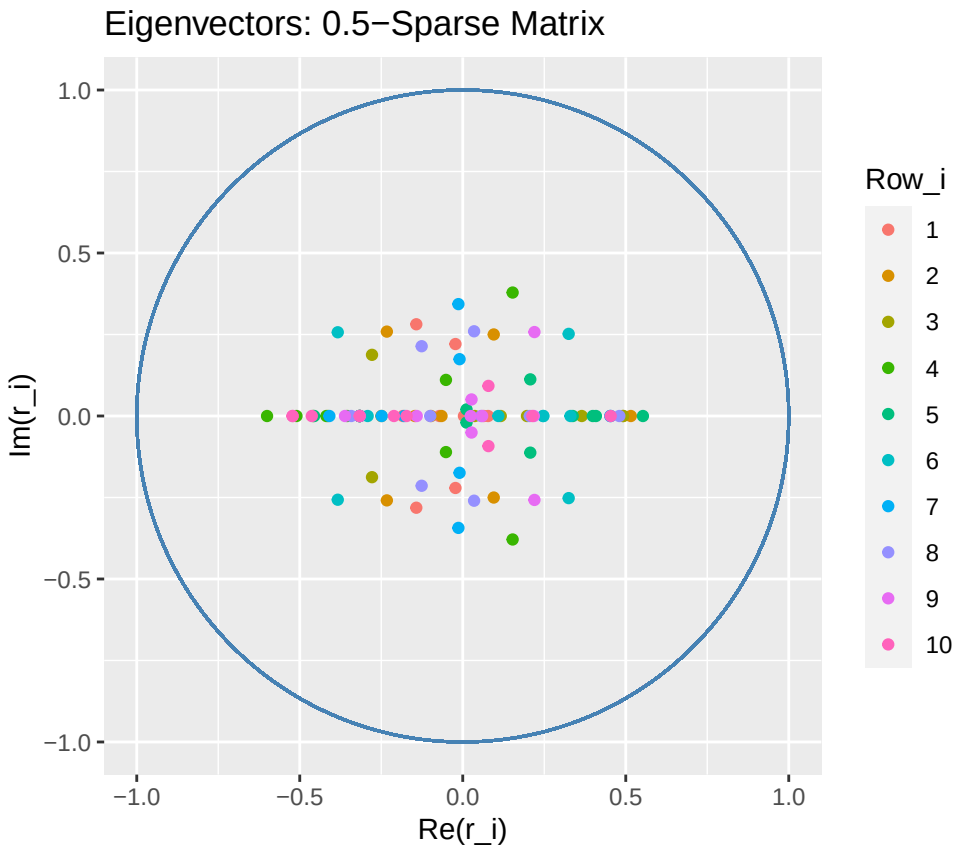
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−1.0
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−0.5
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1.0
Re(r_i)
Row_i
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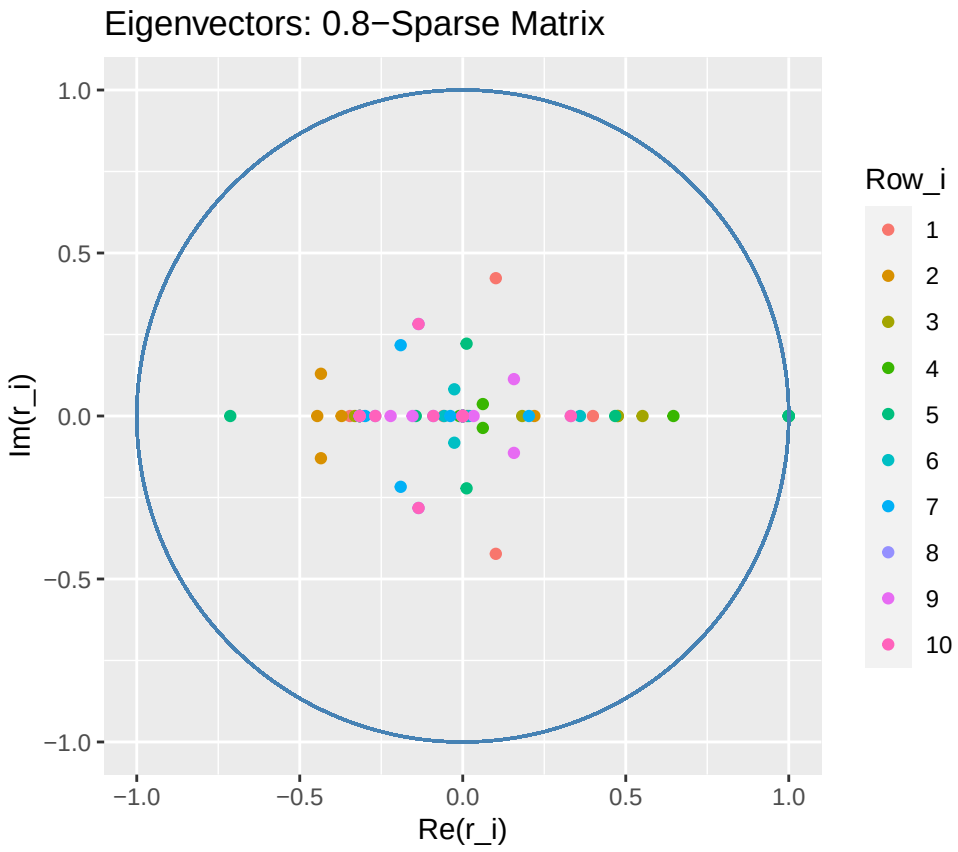
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Re(r_i)
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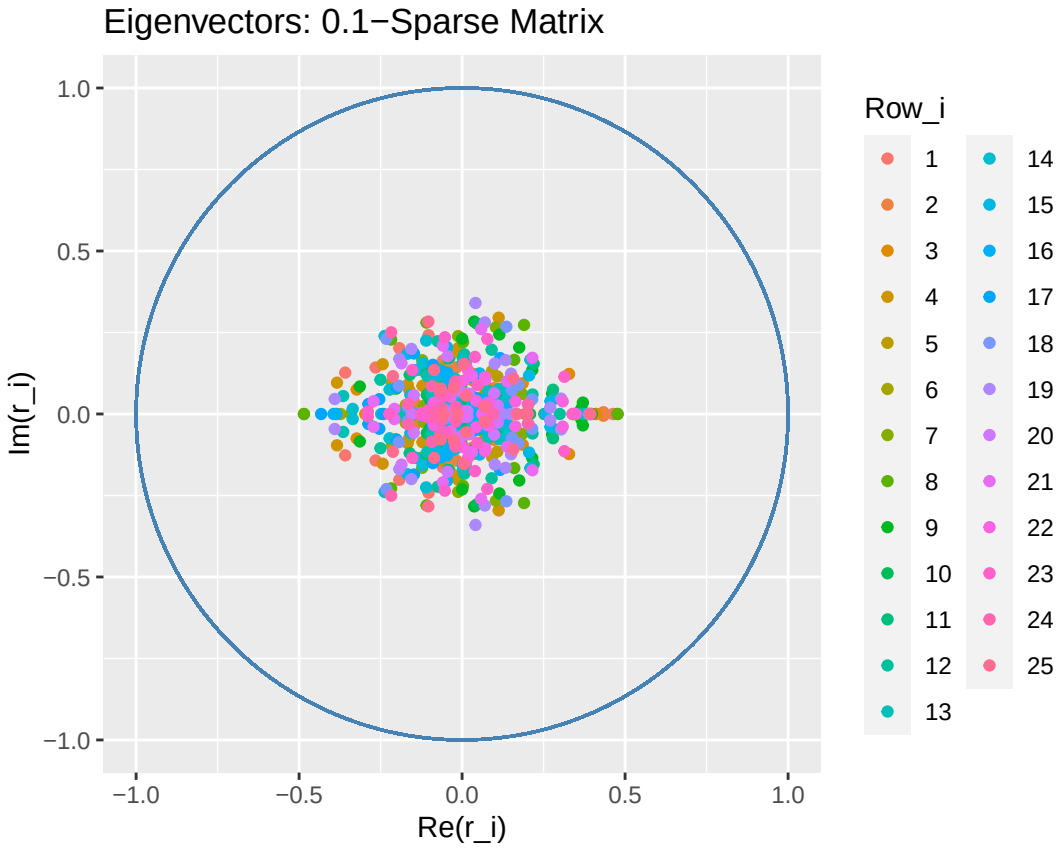
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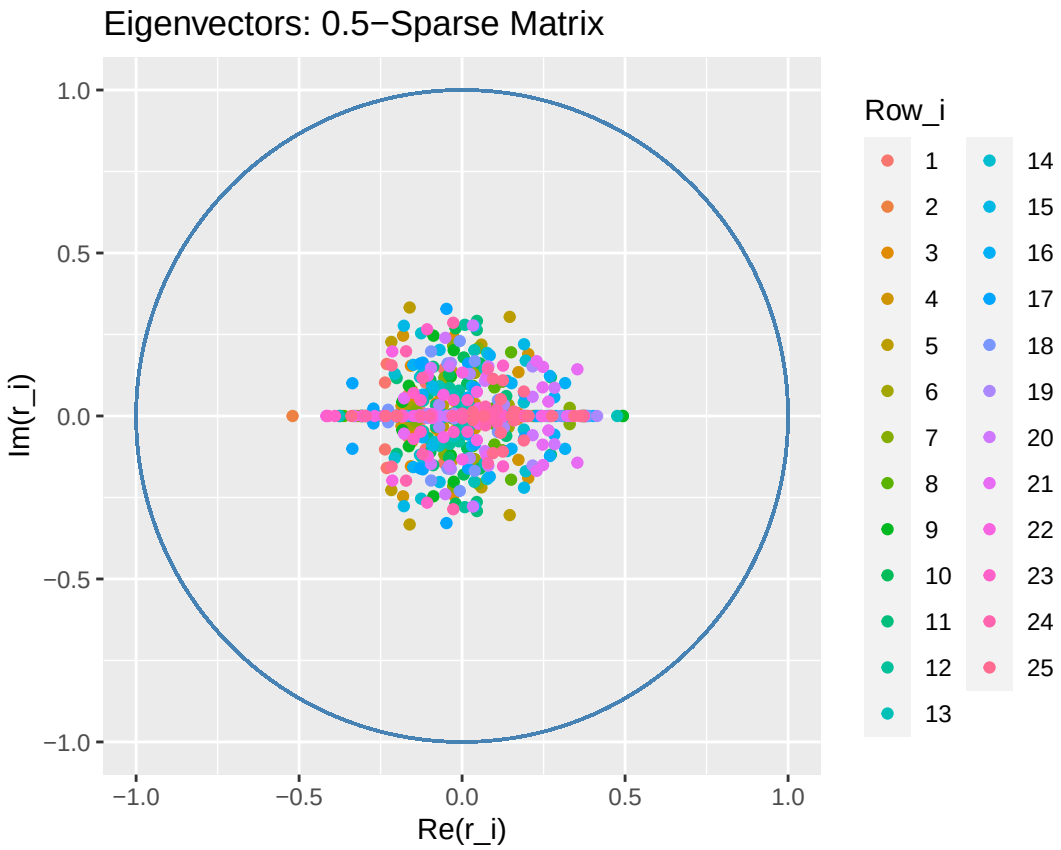
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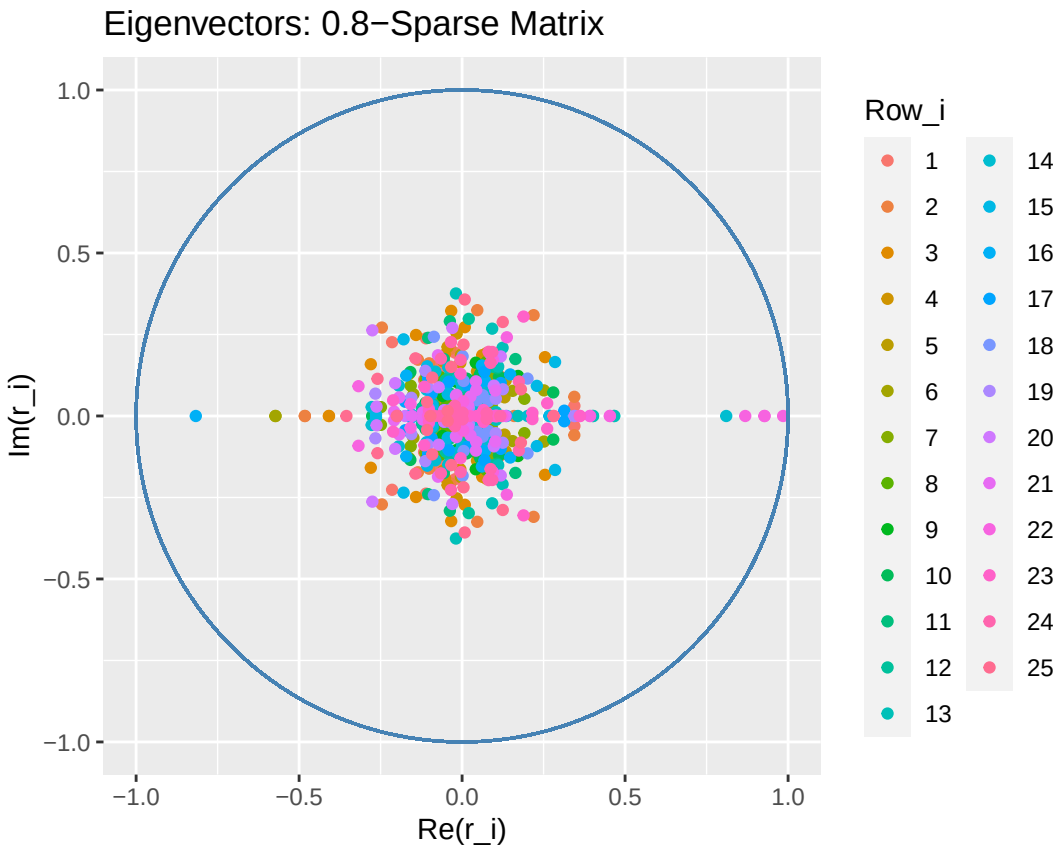
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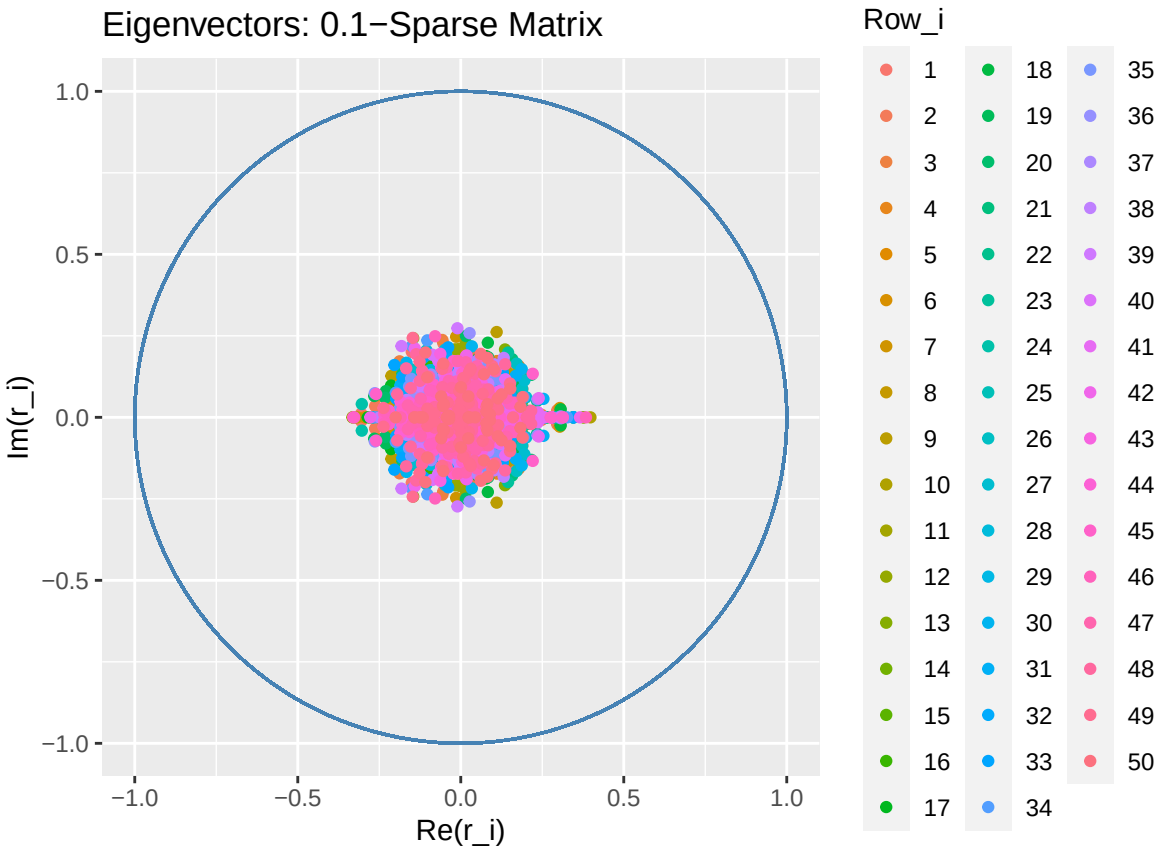
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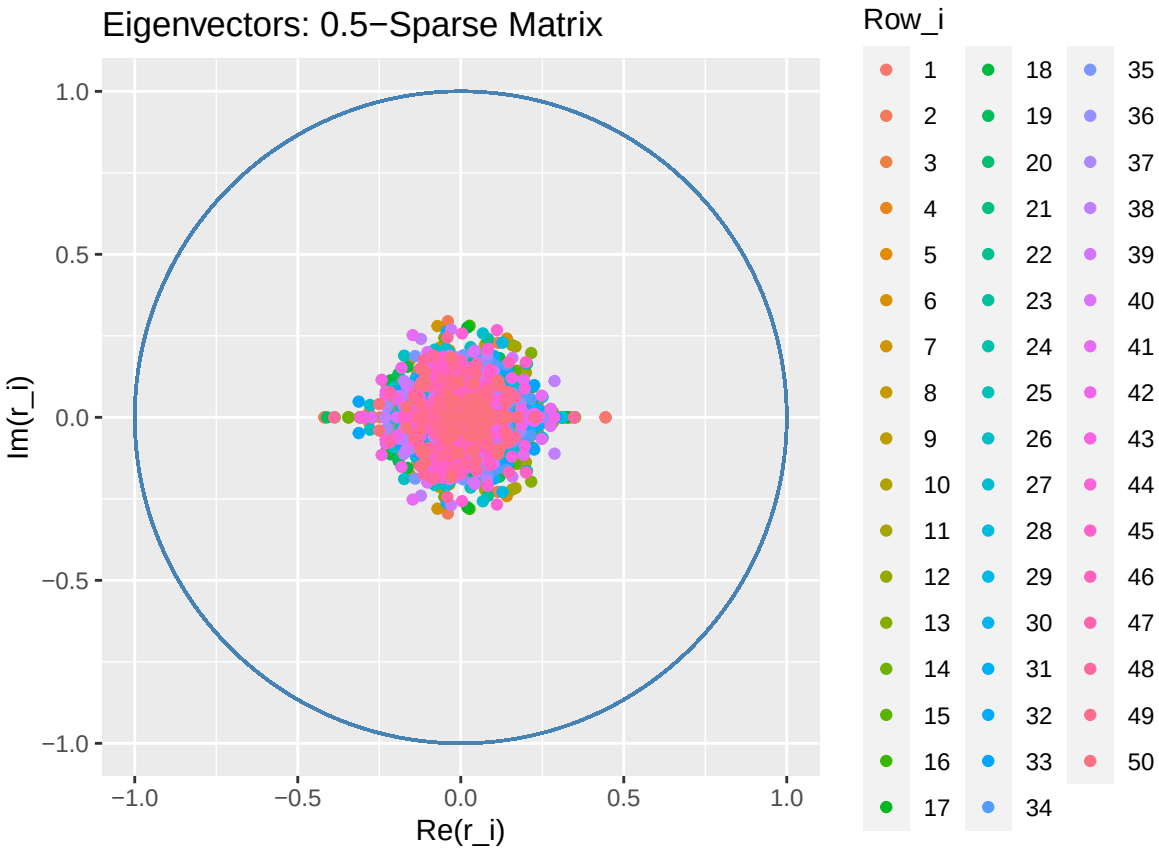
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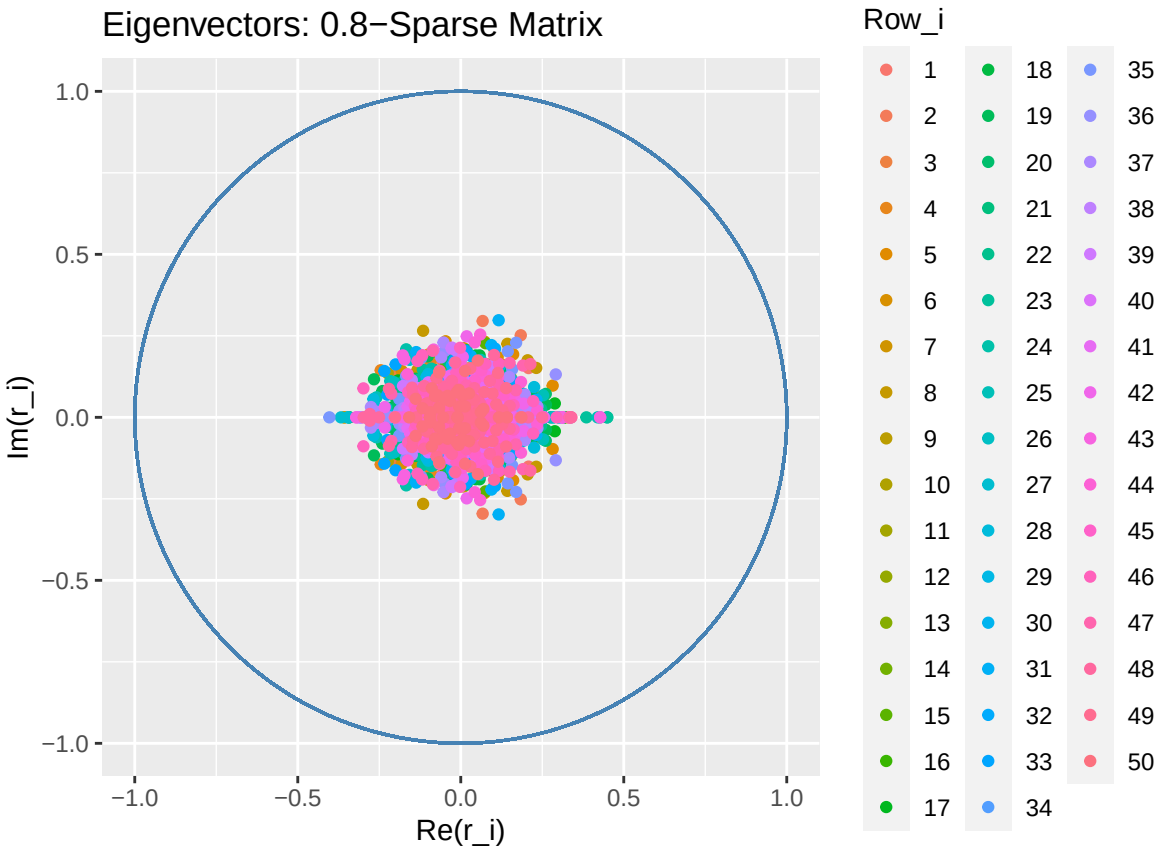
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