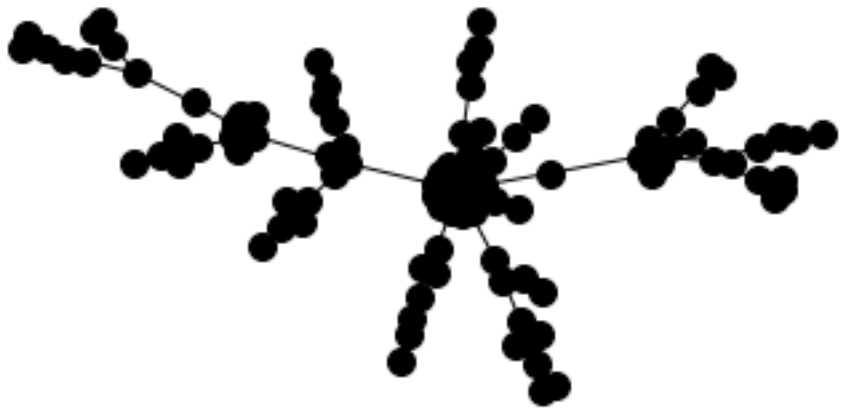
Preferential Attachment Model

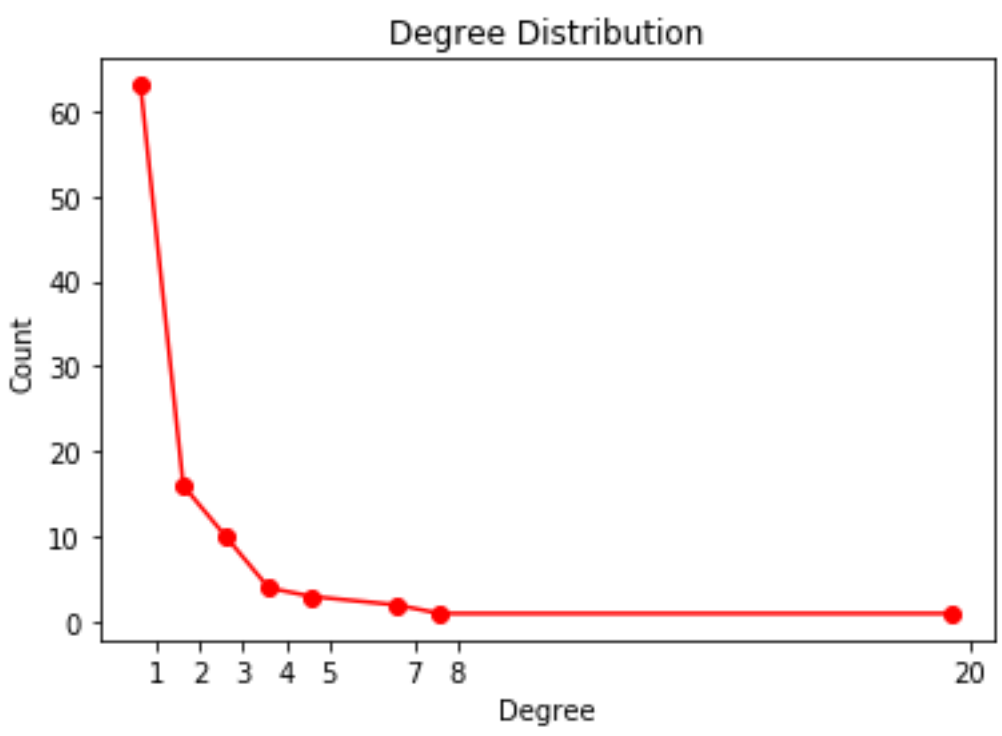
Barabasi Albert Graph of 100 nodes



Degree Distribution Analysis:

[(0, 2), (1, 20), (2, 7), (3, 8), (4, 4), (5, 1), (6, 2), (7, 3), (8, 1),
(9, 5), (10, 2), (11, 3), (12, 7), (13, 1), (14, 1), (15, 3), (16, 1),
(17, 1), (18, 4), (19, 1), (20, 1), (21, 5), (22, 1), (23, 1), (24, 3),
(25, 1), (26, 1), (27, 5), (28, 4), (29, 2), (30, 1), (31, 1), (32, 3),
(33, 3), (34, 1), (35, 1), (36, 2), (37, 1), (38, 1), (39, 2), (40, 4),
(41, 2), (42, 3), (43, 1), (44, 1), (45, 3), (46, 1), (47, 1), (48, 1),
(49, 2), (50, 2), (51, 1), (52, 1), (53, 1), (54, 1), (55, 1), (56, 1),
(57, 1), (58, 1), (59, 1), (60, 2), (61, 2), (62, 1), (63, 1), (64, 1),
(65, 1), (66, 1), (67, 1), (68, 1), (69, 1), (70, 1), (71, 2), (72, 1),
(73, 3), (74, 1), (75, 3), (76, 2), (77, 2), (78, 1), (79, 1), (80, 2),
(81, 1), (82, 1), (83, 1), (84, 1), (85, 1), (86, 1), (87, 1), (88, 1),
(89, 1), (90, 1), (91, 1), (92, 1), (93, 1), (94, 1), (95, 2), (96, 1),
(97, 1), (98, 1), (99, 1)]

('Max Degree : ', 20, 'Min Degree : ', 1)



Eigen value centrality analysis :

['0 0.16', '1 0.68', '2 0.22', '3 0.07', '4 0.17', '5 0.15', '6 0.02', '7 0.05', '8 0.02', '9 0.06', '10 0.16', '11 0.00', '12 0.05', '13 0.05', '14 0.04', '15 0.00', '16 0.15', '17 0.15', '18 0.18', '19 0.04', '20 0.15', '21 0.05', '22 0.01', '23 0.15', '24 0.01', '25 0.15', '26 0.01', '27 0.02', '28 0.01', '29 0.16', '30 0.02', '31 0.03', '32 0.00', '33 0.00', '34 0.01', '35 0.01', '36 0.16', '37 0.15', '38 0.00', '39 0.16', '40 0.00', '41 0.00', '42 0.04', '43 0.01', '44 0.00', '45 0.00', '46 0.00', '47 0.00', '48 0.01', '49 0.01', '50 0.01', '51 0.01', '52 0.00', '53 0.01', '54 0.15', '55 0.15', '56 0.00', '57 0.01', '58 0.05', '59 0.00', '60 0.01', '61 0.00', '62 0.00', '63 0.01', '64 0.00', '65 0.03', '66 0.15', '67 0.02', '68 0.00', '69 0.02', '70 0.00', '71 0.04', '72 0.04', '73 0.04', '74 0.00', '75 0.00', '76 0.04', '77 0.01', '78 0.00', '79 0.02', '80 0.01', '81 0.00', '82 0.01', '83 0.01', '84 0.00', '85 0.00', '86 0.00', '87 0.00', '88 0.01', '89 0.00', '90 0.00', '91 0.15', '92 0.00', '93 0.15', '94 0.01', '95 0.01', '96 0.00', '97 0.00', '98 0.00', '99 0.05']

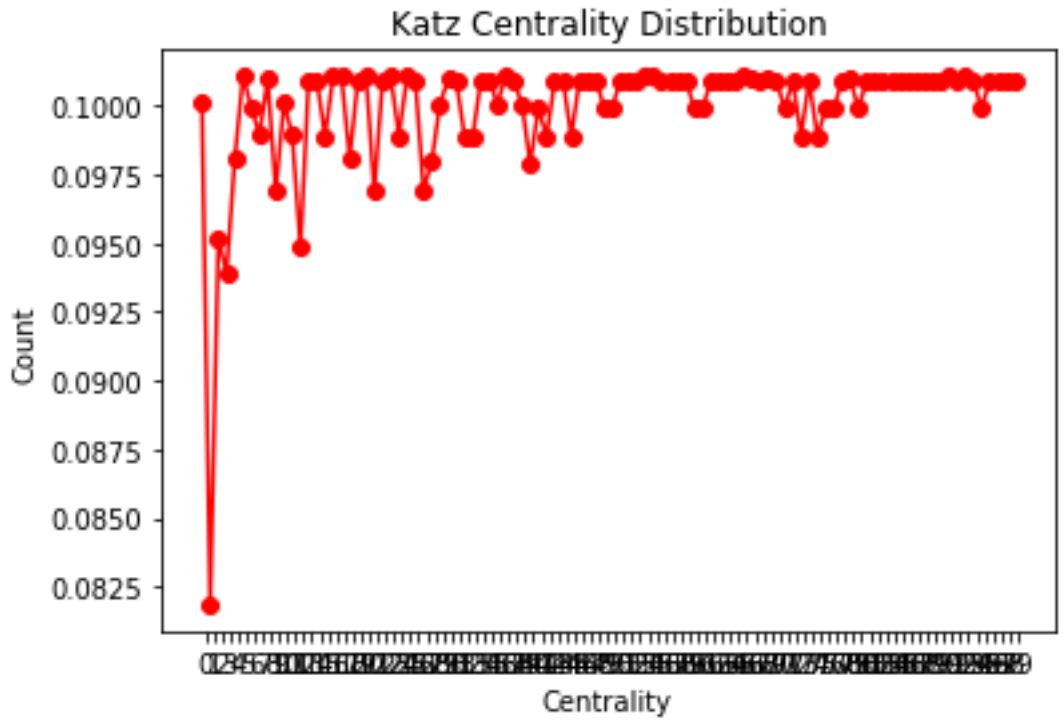
('Max Eigen value : ', 99, 'Min Eigen value : ', 0)

Katz centrality analysis :

['0 0.10', '1 0.08', '2 0.10', '3 0.09', '4 0.10', '5 0.10', '6 0.10', '7 0.10', '8 0.10', '9 0.10', '10 0.10', '11 0.10', '12 0.09', '13 0.10', '14 0.10', '15 0.10', '16 0.10', '17 0.10', '18 0.10', '19 0.10', '20 0.10', '21 0.10', '22 0.10', '23 0.10', '24 0.10', '25 0.10', '26 0.10', '27 0.10', '28 0.10', '29 0.10', '30 0.10', '31 0.10', '32 0.10', '33 0.10', '34 0.10', '35 0.10', '36 0.10', '37 0.10', '38 0.10', '39 0.10',

'40 0.10', '41 0.10', '42 0.10', '43 0.10', '44 0.10', '45 0.10', '46 0.10', '47 0.10', '48 0.10', '49 0.10', '50 0.10', '51 0.10', '52 0.10', '53 0.10', '54 0.10', '55 0.10', '56 0.10', '57 0.10', '58 0.10', '59 0.10', '60 0.10', '61 0.10', '62 0.10', '63 0.10', '64 0.10', '65 0.10', '66 0.10', '67 0.10', '68 0.10', '69 0.10', '70 0.10', '71 0.10', '72 0.10', '73 0.10', '74 0.10', '75 0.10', '76 0.10', '77 0.10', '78 0.10', '79 0.10', '80 0.10', '81 0.10', '82 0.10', '83 0.10', '84 0.10', '85 0.10', '86 0.10', '87 0.10', '88 0.10', '89 0.10', '90 0.10', '91 0.10', '92 0.10', '93 0.10', '94 0.10', '95 0.10', '96 0.10', '97 0.10', '98 0.10', '99 0.10']

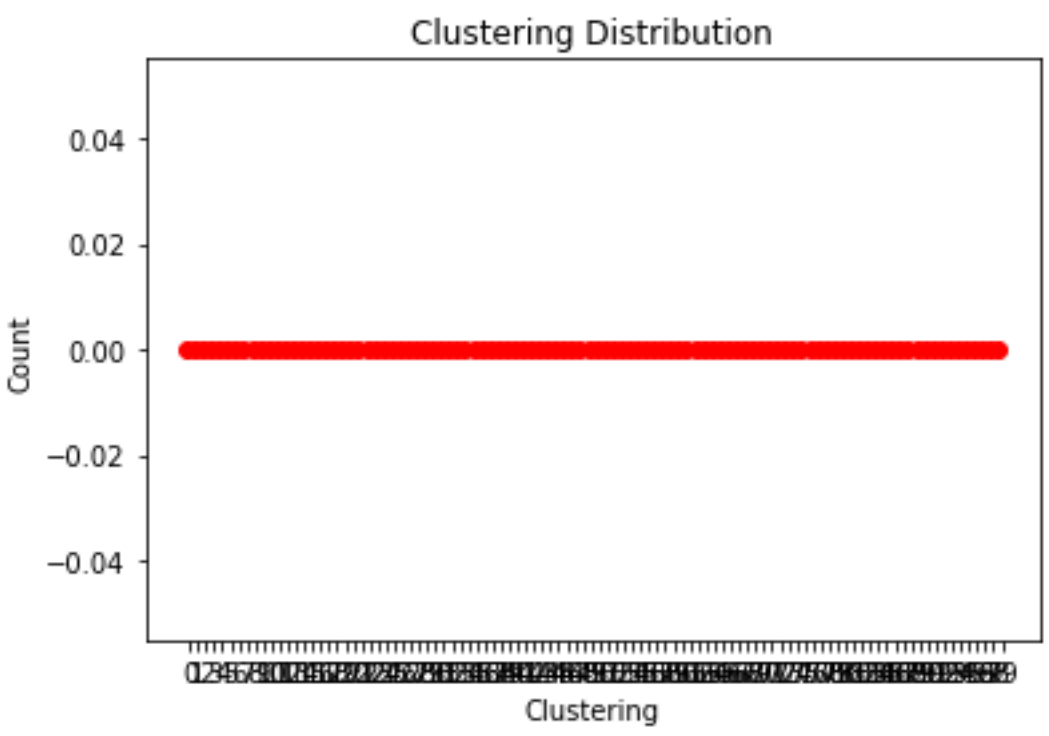
('Avg. katz centrality : ', 49, 'Max. katz centrality : ', 99)



Clustering coefficients Analysis:

{0: 0, 1: 0, 2: 0, 3: 0, 4: 0, 5: 0, 6: 0, 7: 0, 8: 0, 9: 0, 10: 0, 11: 0, 12: 0, 13: 0, 14: 0, 15: 0, 16: 0, 17: 0, 18: 0, 19: 0, 20: 0, 21: 0, 22: 0, 23: 0, 24: 0, 25: 0, 26: 0, 27: 0, 28: 0, 29: 0, 30: 0, 31: 0, 32: 0, 33: 0, 34: 0, 35: 0, 36: 0, 37: 0, 38: 0, 39: 0, 40: 0, 41: 0, 42: 0, 43: 0, 44: 0, 45: 0, 46: 0, 47: 0, 48: 0, 49: 0, 50: 0, 51: 0, 52: 0, 53: 0, 54: 0, 55: 0, 56: 0, 57: 0, 58: 0, 59: 0, 60: 0, 61: 0, 62: 0, 63: 0, 64: 0, 65: 0, 66: 0, 67: 0, 68: 0, 69: 0, 70: 0, 71: 0, 72: 0, 73: 0, 74: 0, 75: 0, 76: 0, 77: 0, 78: 0, 79: 0, 80: 0, 81: 0, 82: 0, 83: 0, 84: 0, 85: 0, 86: 0, 87: 0, 88: 0, 89: 0, 90: 0, 91: 0, 92: 0, 93: 0, 94: 0, 95: 0, 96: 0, 97: 0, 98: 0, 99: 0}

('Avg. clustering : ', 0.0, 'Max. clustering : ', 99)


Clustering Distribution
0.04
0.02
0.00
−0.02
−0.04
Count
Clustering