



UNIVERSIDADE FEDERAL DE SÃO JOÃO DEL-REI
CIÊNCIA DA COMPUTAÇÃO

Ajuste de Parâmetros

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São João del-Rei

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1 Icsv

1.1 rand1bin

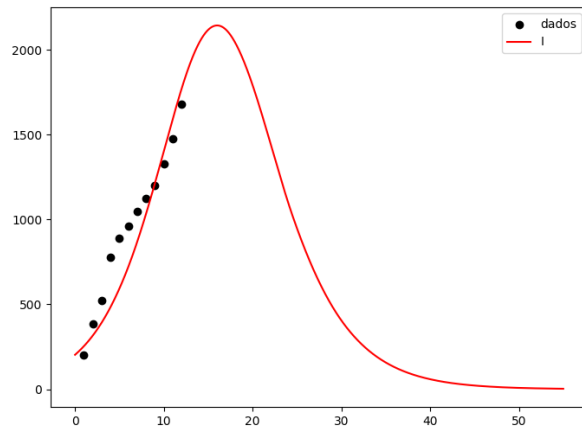


Figura 1: Simulação de I

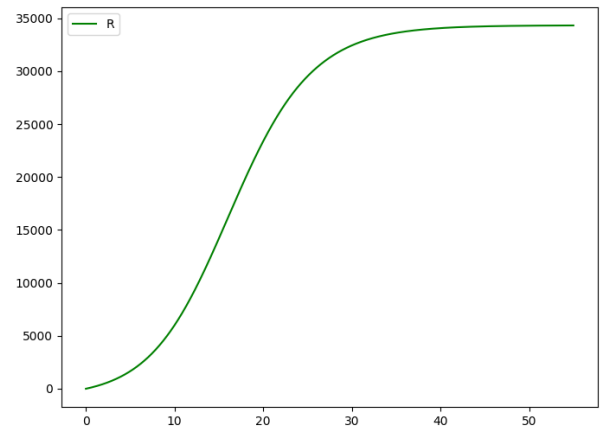


Figura 2: Simulação de R

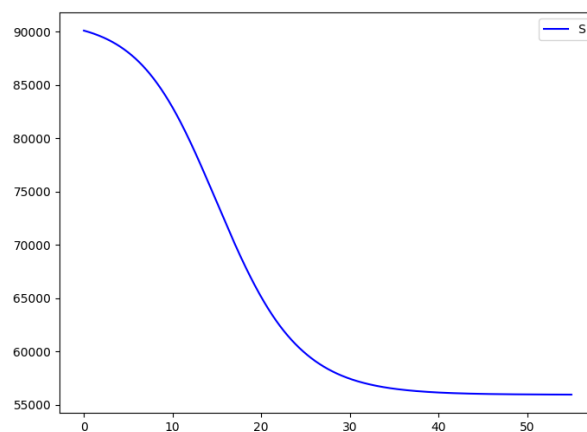


Figura 3: Simulação de S

1.2 rand2bin

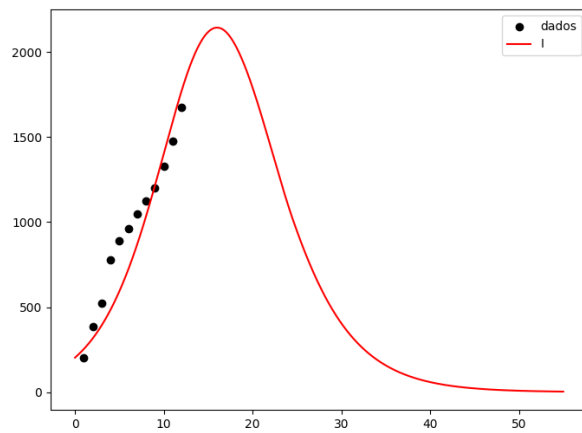


Figura 4: Simulação de I

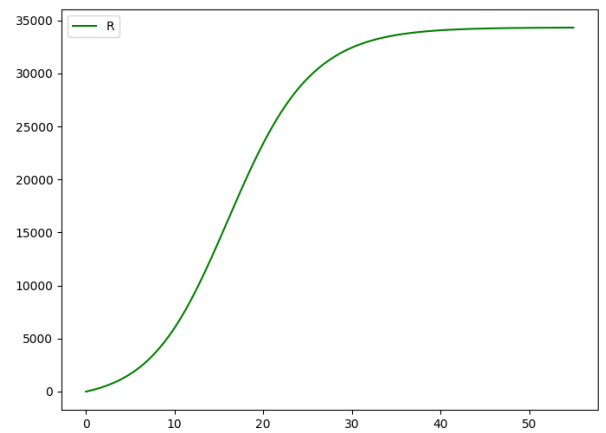


Figura 5: Simulação de R

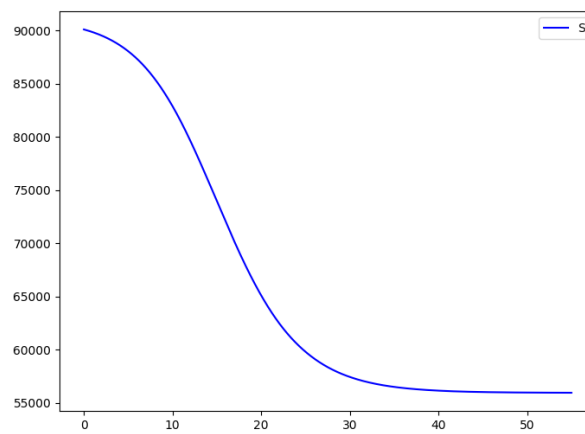


Figura 6: Simulação de S

1.3 best1bin

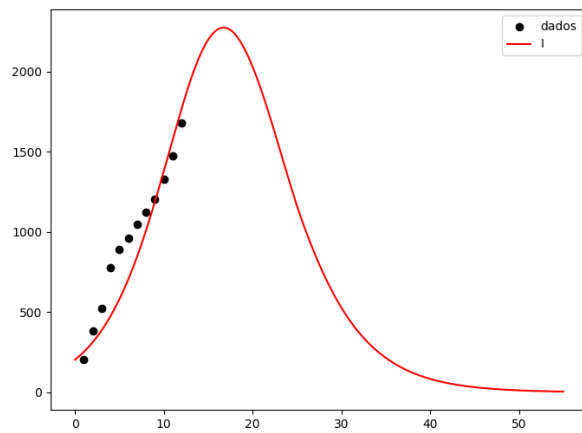


Figura 7: Simulação de I

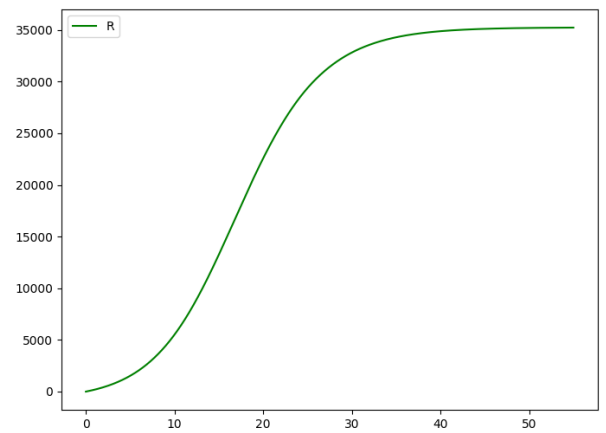


Figura 8: Simulação de R

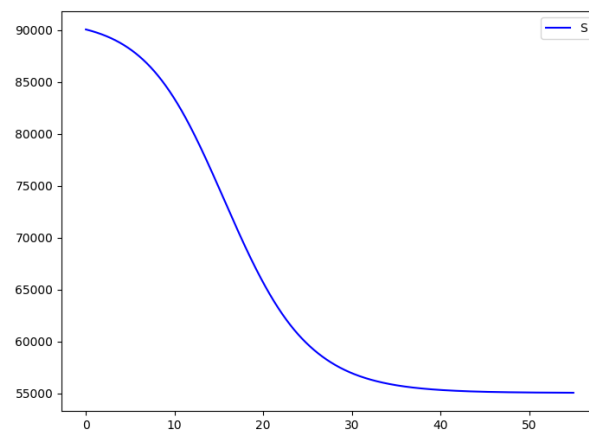


Figura 9: Simulação de S

1.4 best2bin

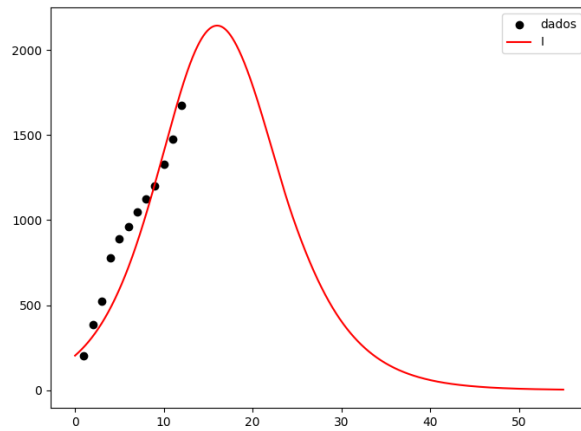


Figura 10: Simulação de I

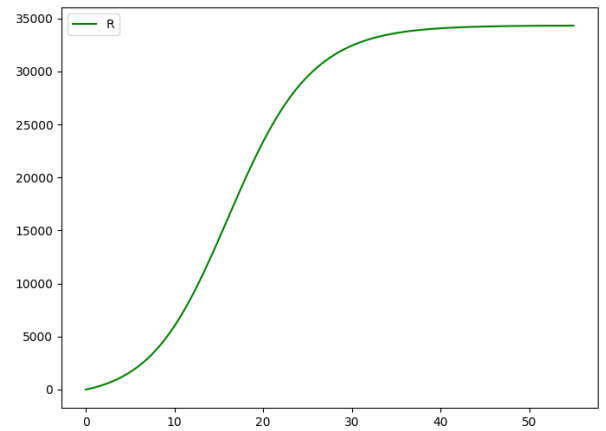


Figura 11: Simulação de R

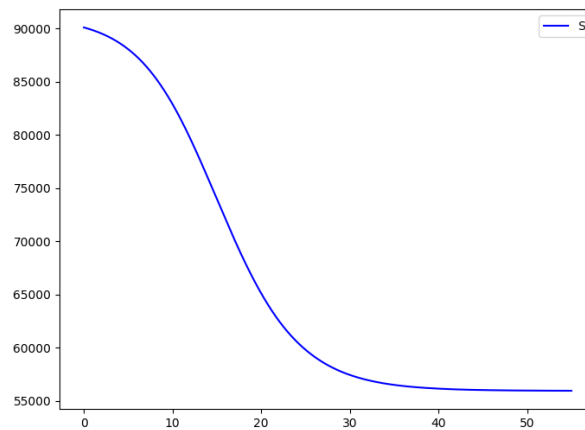


Figura 12: Simulação de S

1.5 Melhor ajuste (menor erro)

Dados os ajustes de cada estratégia temos que:

rand1bin	rand2bin	best1bin	best2bin
0.5591929782265138	5.9499966030850375	0.1627673072452154	2.3951278999659604

Comparando os valores da tabela acima temos que a melhor estratégia para o ajuste foi a **best1bin**, com o menor erro.

2 Casos 2021

2.1 rand1bin

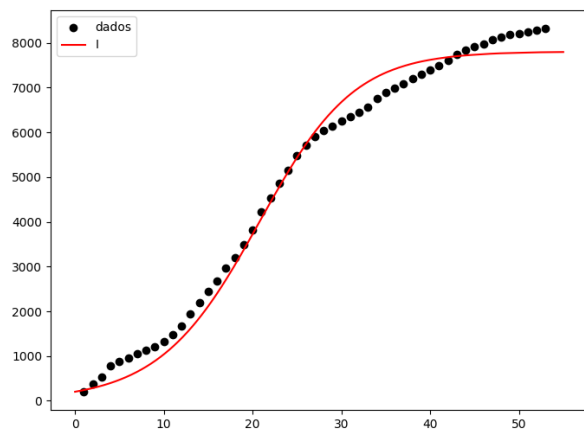


Figura 13: Simulação de I

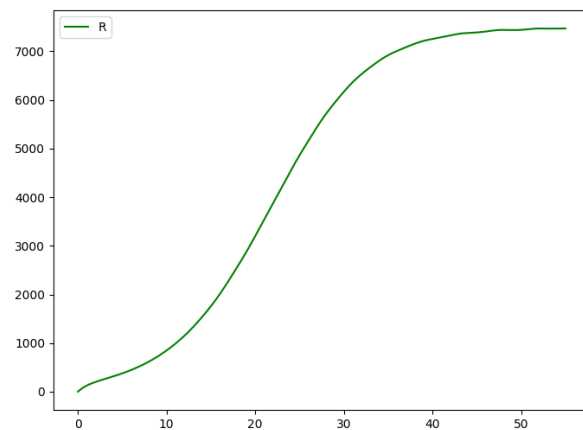


Figura 14: Simulação de R

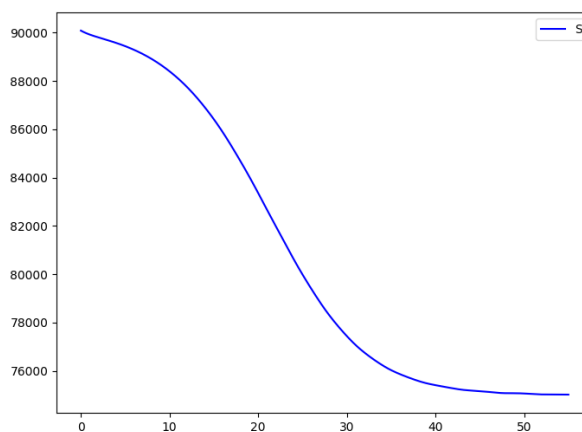


Figura 15: Simulação de S

2.2 rand2bin

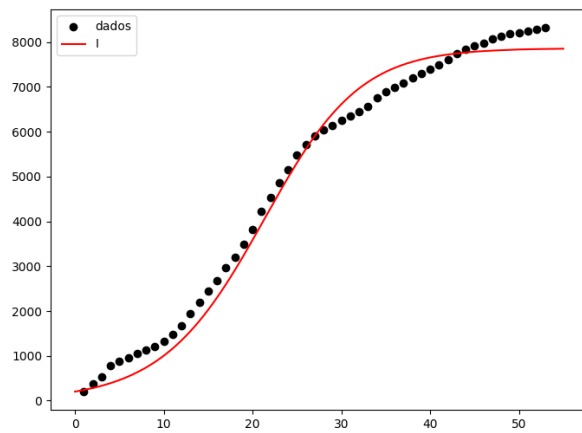


Figura 16: Simulação de I

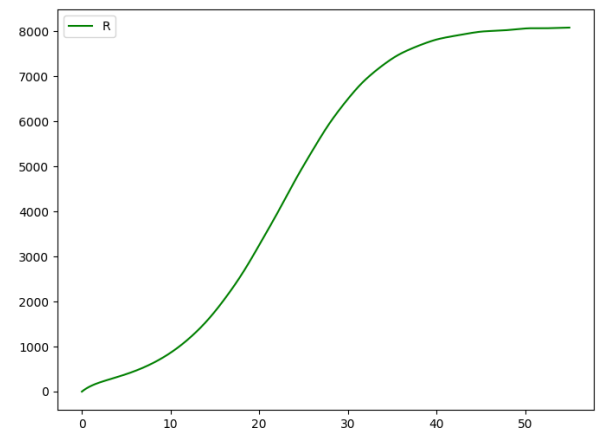


Figura 17: Simulação de R

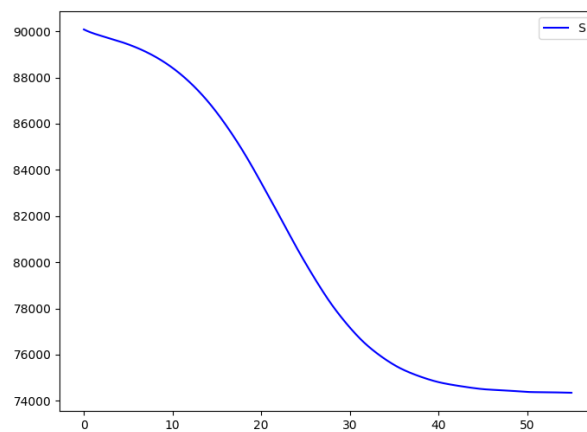


Figura 18: Simulação de S

2.3 best1bin

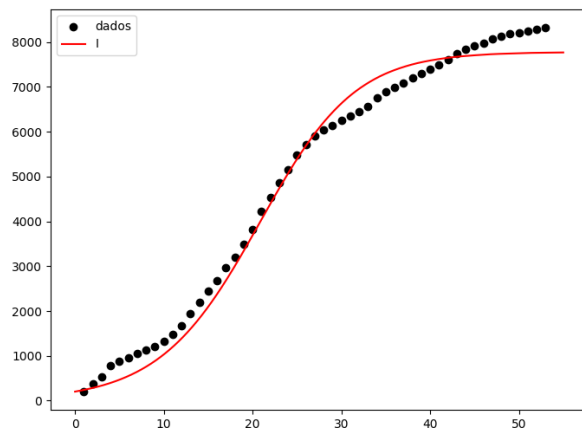


Figura 19: Simulação de I

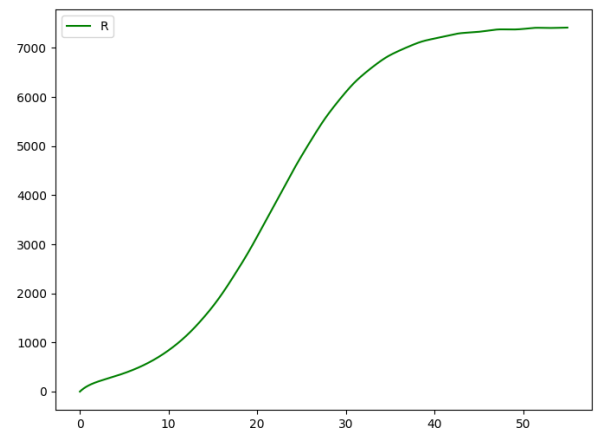


Figura 20: Simulação de R

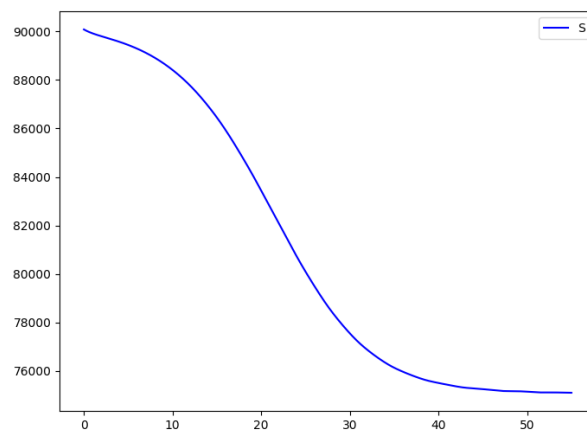


Figura 21: Simulação de S

2.4 best2bin

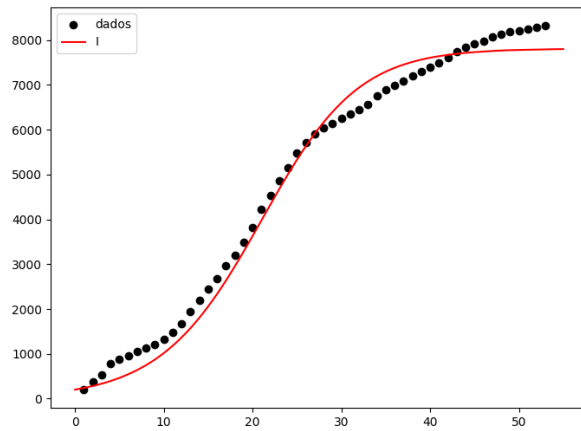


Figura 22: Simulação de I

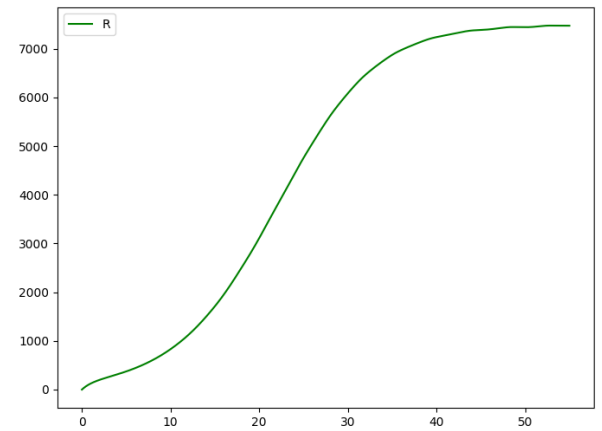


Figura 23: Simulação de R

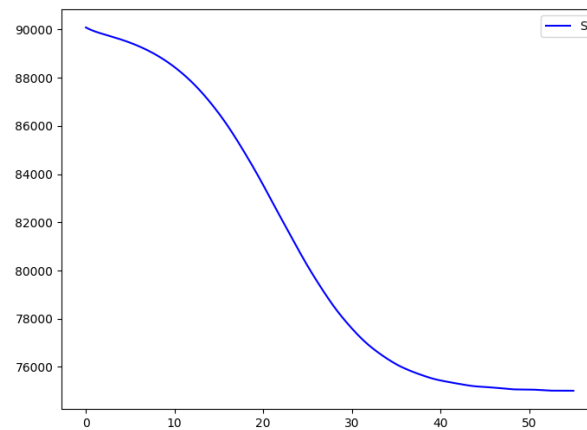


Figura 24: Simulação de S

2.5 Melhor ajuste (menor erro)

Dados os ajustes de cada estratégia temos que:

rand1bin	rand2bin	best1bin	best2bin
0.05652731007208035	0.05843378527996178	0.05630821754742569	0.0567682230793159

Comparando os valores da tabela acima temos que a melhor estratégia para o ajuste foi a **best1bin**, com o menor erro.

3 Obitos 2021

3.1 rand1bin

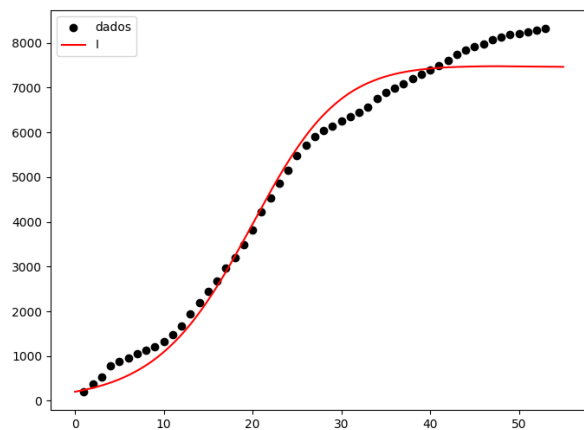


Figura 25: Simulação de I

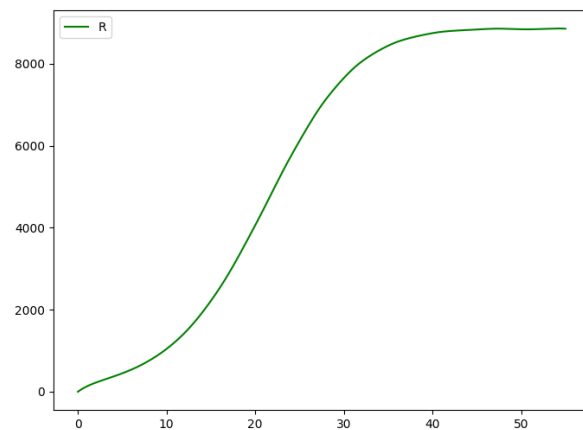


Figura 26: Simulação de R

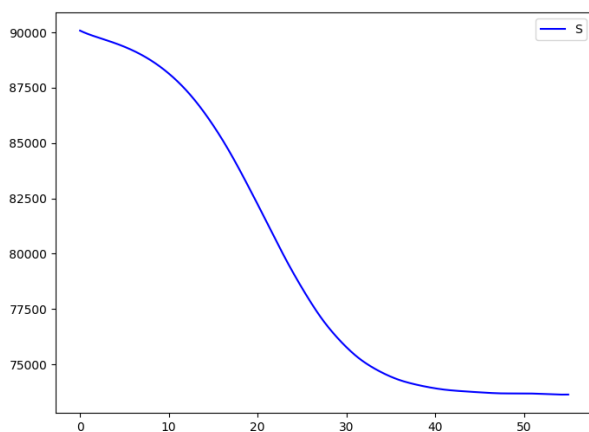


Figura 27: Simulação de S

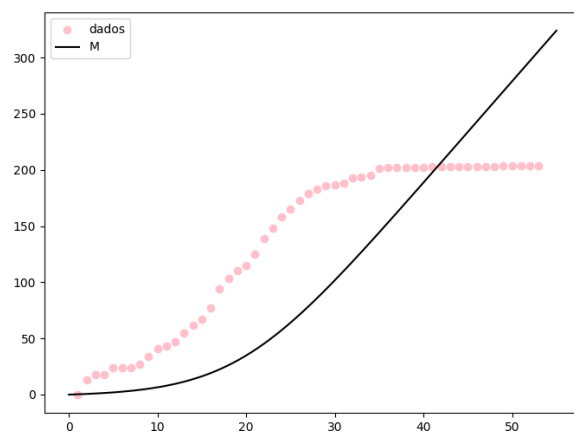


Figura 28: Simulação de M

3.2 rand2bin

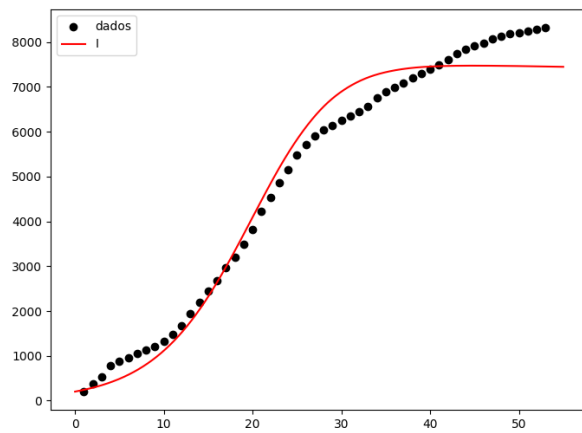


Figura 29: Simulação de I

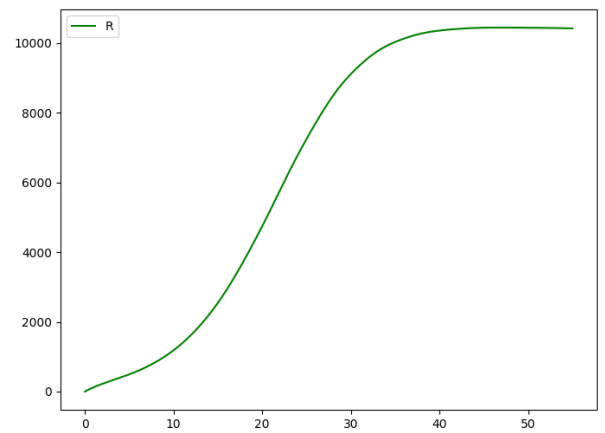


Figura 30: Simulação de R

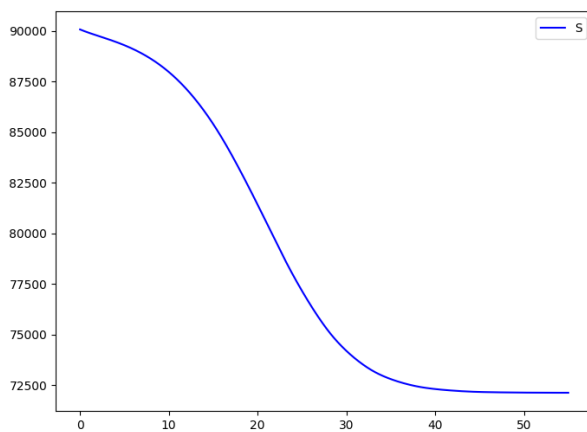


Figura 31: Simulação de S

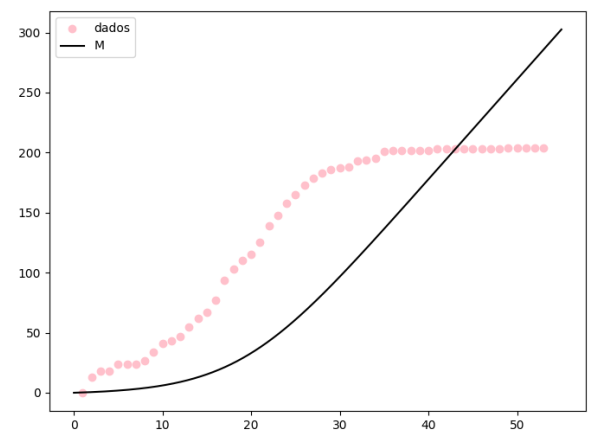


Figura 32: Simulação de M

3.3 best1bin

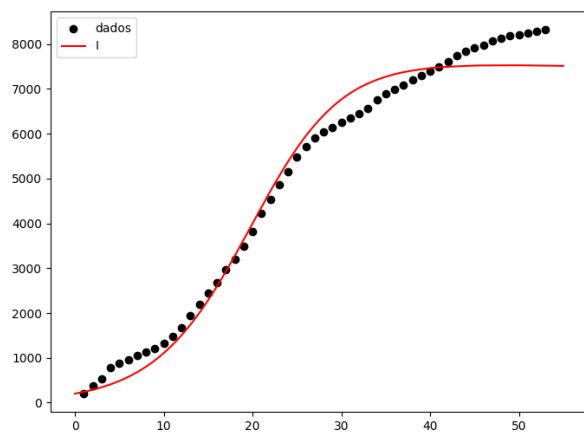


Figura 33: Simulação de I

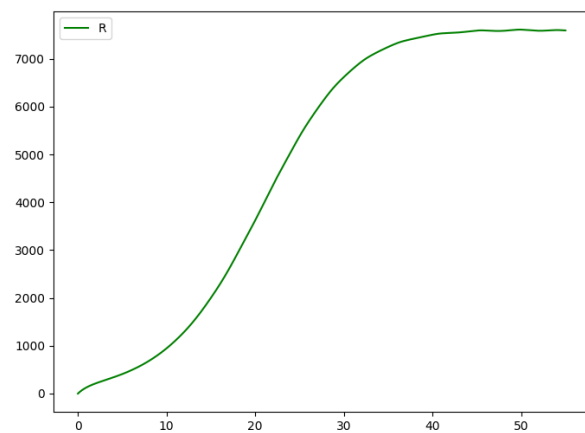


Figura 34: Simulação de R

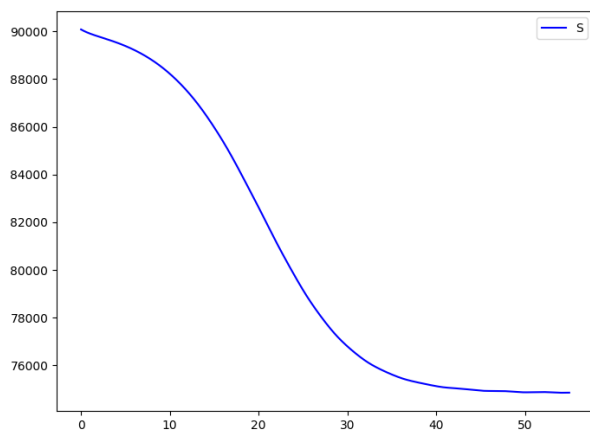


Figura 35: Simulação de S

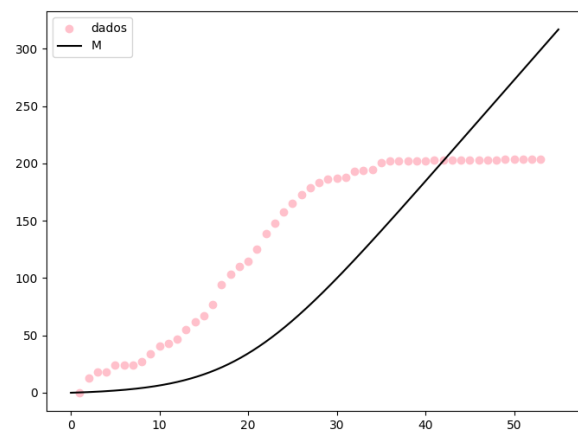


Figura 36: Simulação de M

3.4 best2bin

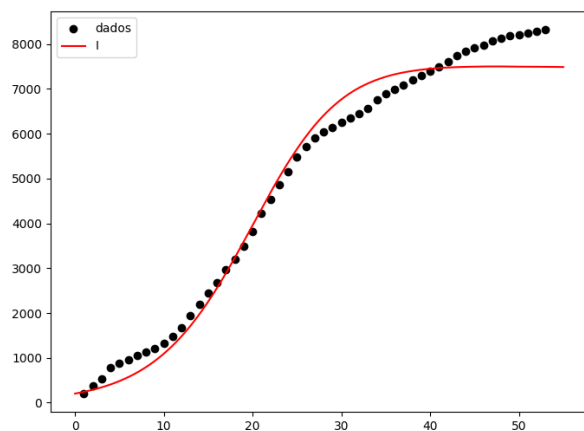


Figura 37: Simulação de I

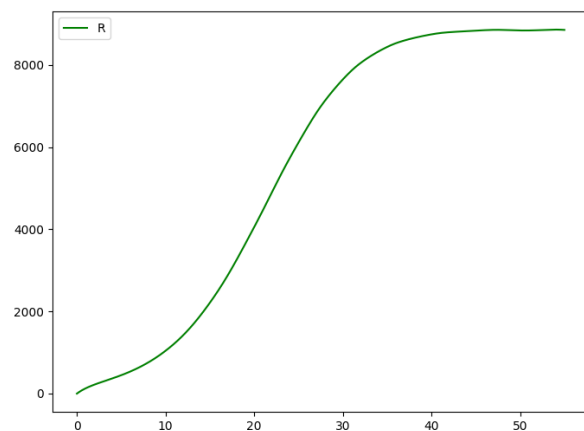


Figura 38: Simulação de R

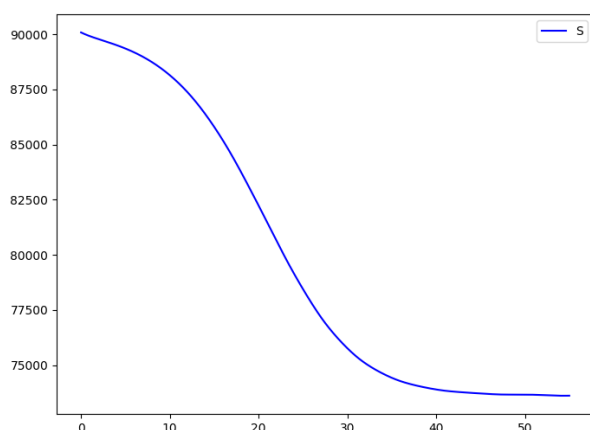


Figura 39: Simulação de S

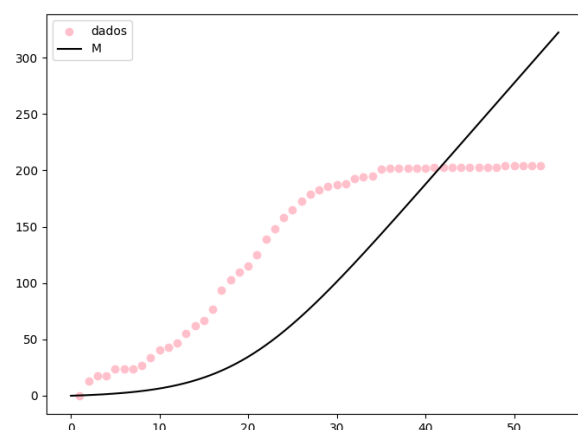


Figura 40: Simulação de M

3.5 Melhor ajuste (menor erro)

rand1bin	rand2bin	best1bin	best2bin
0.47077216621227597	0.54369582718258	0.46651917048553815	0.47056029918621933

Comparando os valores da tabela acima temos que a melhor estratégia para o ajuste foi a **best2bin**, com o menor erro.

3.6 Melhor ajuste para M

No modelo de obitos, quando realizamos o ajuste para obtermos uma melhor relação com o números de mortes(M), perdemos o ajuste para o casos(I), para o número de

recuperados(R) ouve uma queda nas semanas finais e para os Susceptíveis(S) ouve um aumento nas semanas finais.

Concluimos que para obtermos um melhor ajuste para os 2 se deve adicionar mais condições ao modelo.

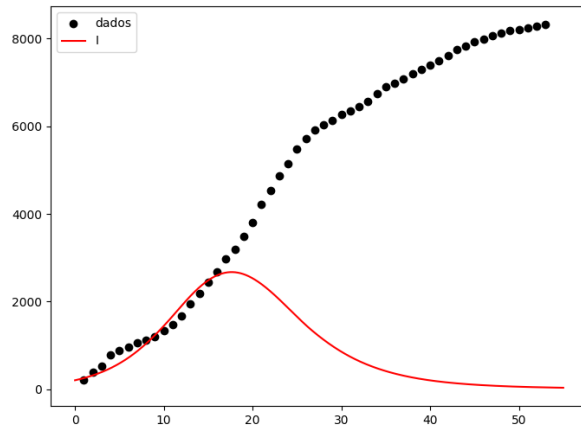


Figura 41: Simulação de I

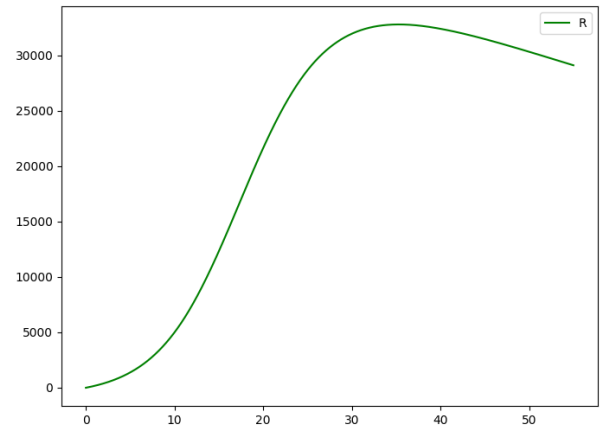


Figura 42: Simulação de R

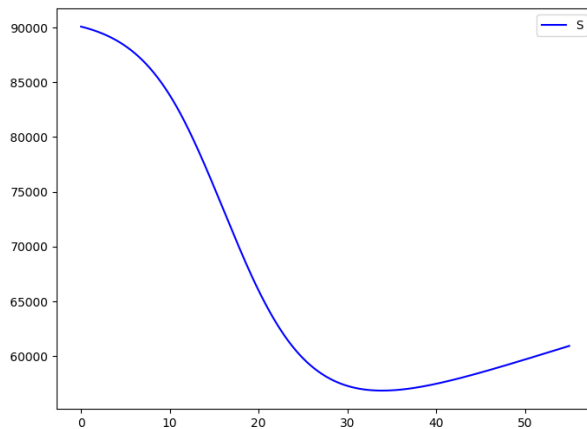


Figura 43: Simulação de S

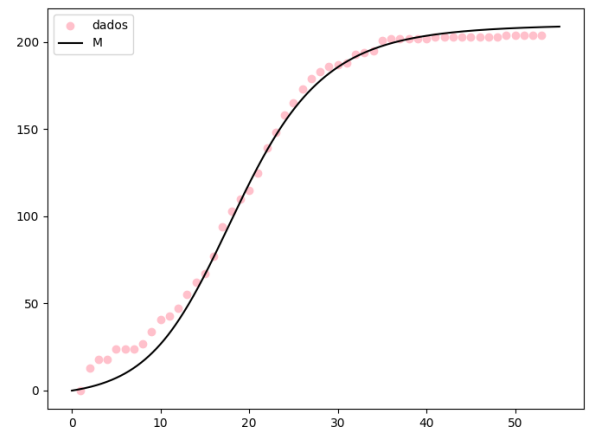


Figura 44: Simulação de M