# DQN model test

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# Initial condition

# SIR model

max time: 30

n episodes: 8000

epsilon start: 1

epsilon decay: 0.99

epsilon end: 0

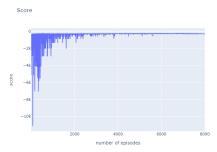
S0: 9990 I0: 10

gamma: 0.5

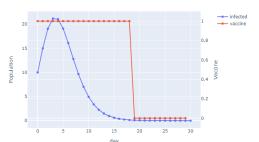
beta: 0.0001

nu: 0.2

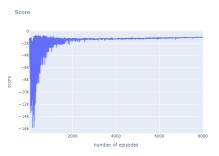
### reward: I-10nu



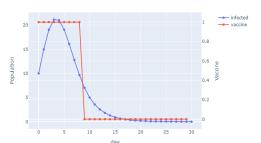




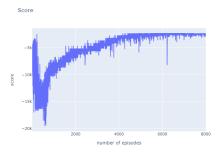
### reward: I-100nu



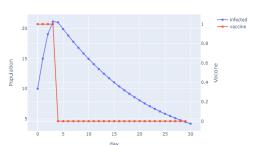




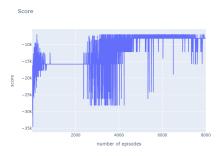
## reward: I-500nu



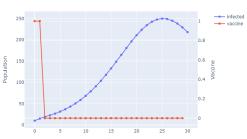




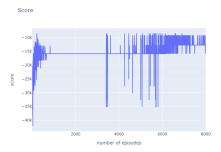
### reward: I-2000nu



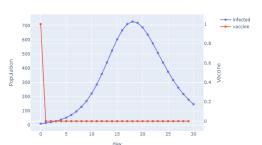




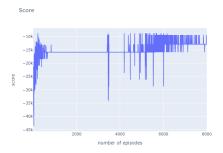
### reward: I-2500nu



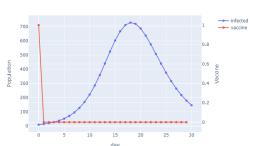




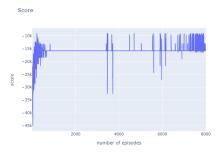
### reward: I-2600nu

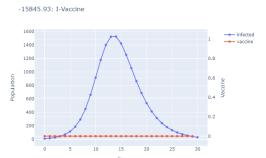




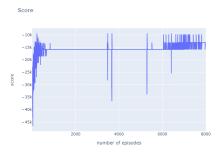


### reward: I-2700nu

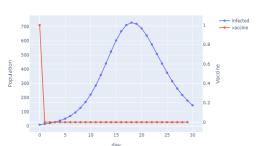




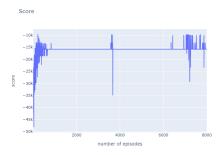
### reward: I-2800nu

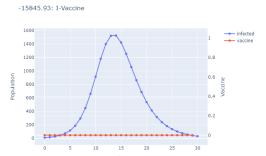






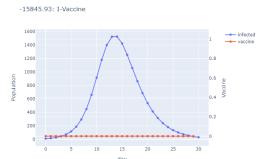
### reward: I-2900nu



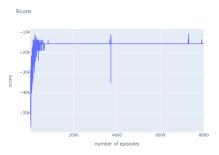


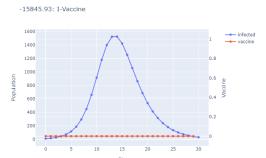
### reward: I-3000nu



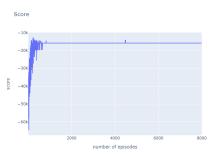


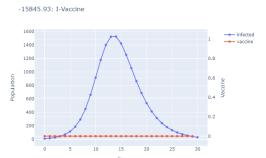
## reward: I-3500nu



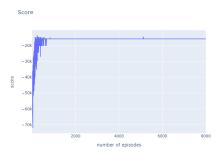


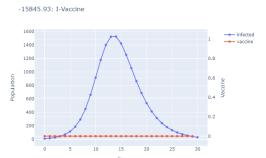
### reward: I-4000nu



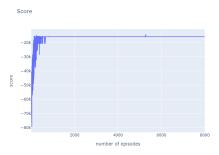


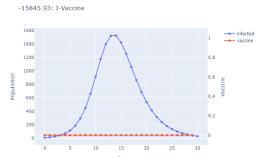
### reward: I-4500nu



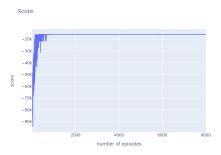


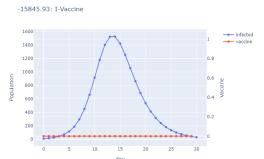
### reward: I-5000nu



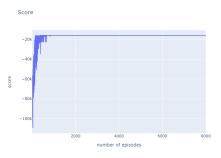


### reward: I-6000nu





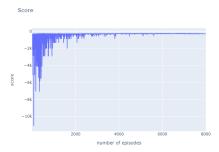
### reward: I-7000nu



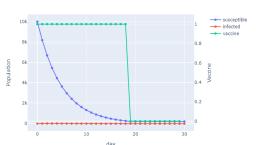




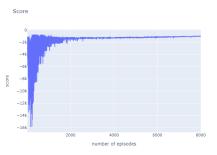
### reward: I-10nu



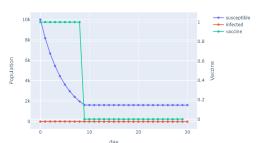
#### -345.60: SIR model with control



### reward: I-100nu



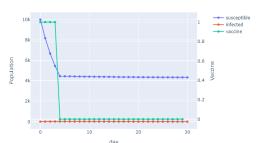
-1058.40: SIR model with control



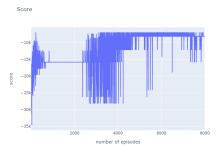
### reward: I-500nu

-5k
-10k
-20k
-2000
4000
s000
number of episodes

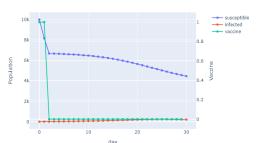
-2346.35: SIR model with control



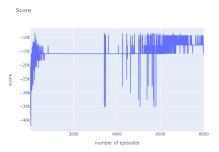
### reward: I-2000nu



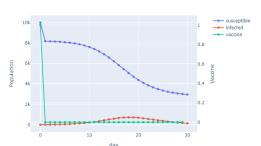




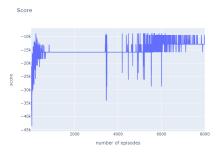
### reward: I-2500nu



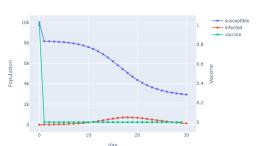
#### -12736.26: SIR model with control



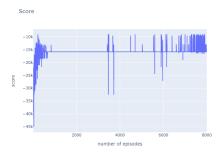
### reward: I-2600nu

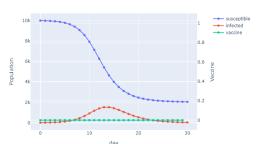


#### -12836.26: SIR model with control

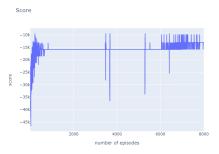


### reward: I-2700nu

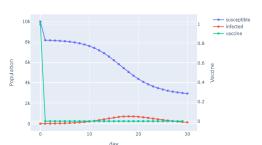




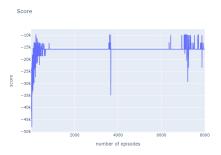
### reward: I-2800nu

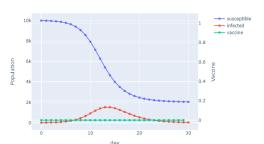


#### -13036.26: SIR model with control

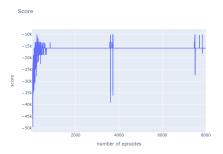


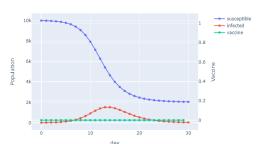
### reward: I-2900nu



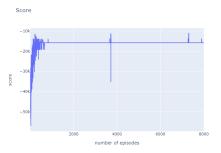


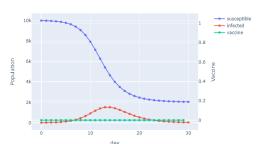
### reward: I-3000nu



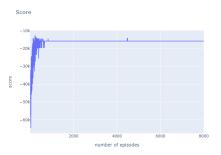


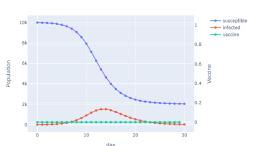
### reward: I-3500nu



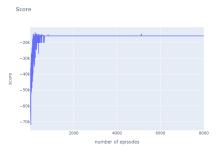


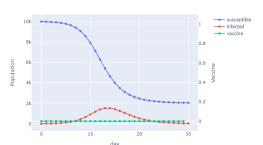
### reward: I-4000nu



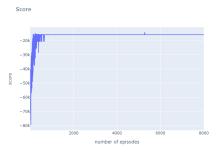


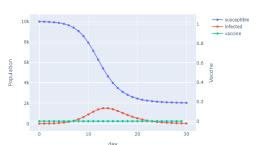
### reward: I-4500nu



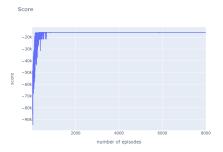


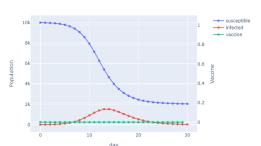
### reward: I-5000nu





### reward: I-6000nu





### reward: I-7000nu

