Algorithm:Genetic algorithm

function GET ACTION(S as state)
    for $1 \leq i \leq 108$ **do** ▷ There are 108 cards in a UNO deck
        $\texttt{Mask}_i \leftarrow [\text{Card}_i \in \texttt{S.Playable}]$ ▷ [ ] represents Iverson bracket
    $\texttt{Mask}_0 \leftarrow 1$ ▷ Player may always take a card from the deck
    Result ← Network.Run(S)
    Result ← Sigmoid(Result) + 1
    return Argmax(Mask $\odot$ Result) ▷ $\odot$ represents Hadamard product

function GENETIC DIFFUSION
    Alpha ← The cell achieved the highest rank
    for Cell **in** Petri \ Alpha **do**
        Cell.Weights ← (Cell.Weights + Alpha.Weights) / 2

function MUTATE
    for Cell **in** Petri **do**
        Cell.Weights ← Cell.Weights + Gaussian random()

function EVOLUTION
    Petri ← Cells initialized with zero weights
    for Cell **in** Petri **do**
        for 1 To N **do** ▷ N is an arbitrary number
            Result ← Cell v.s. Opponent
            if Result **is** Win **then**
                Cell.Rank ← Cell.Rank + 1
    Genetic Diffusion()
    Mutate()
    Plot Winrate()