Machine learning and the Iterated Prisoner's Dilemma

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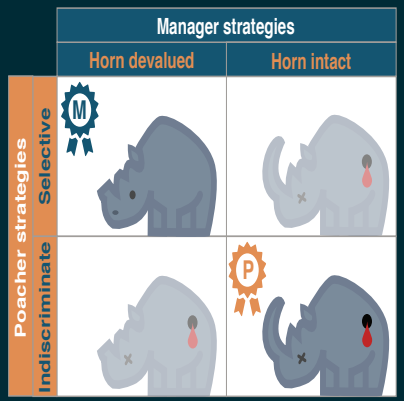
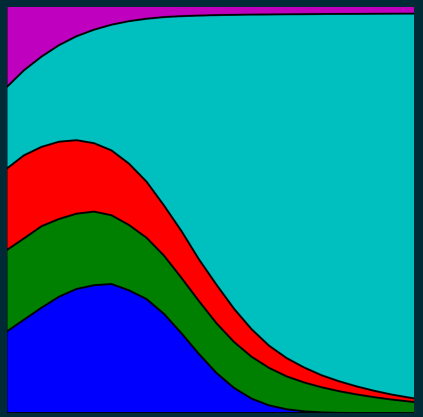
Software
Sustainability
Institute

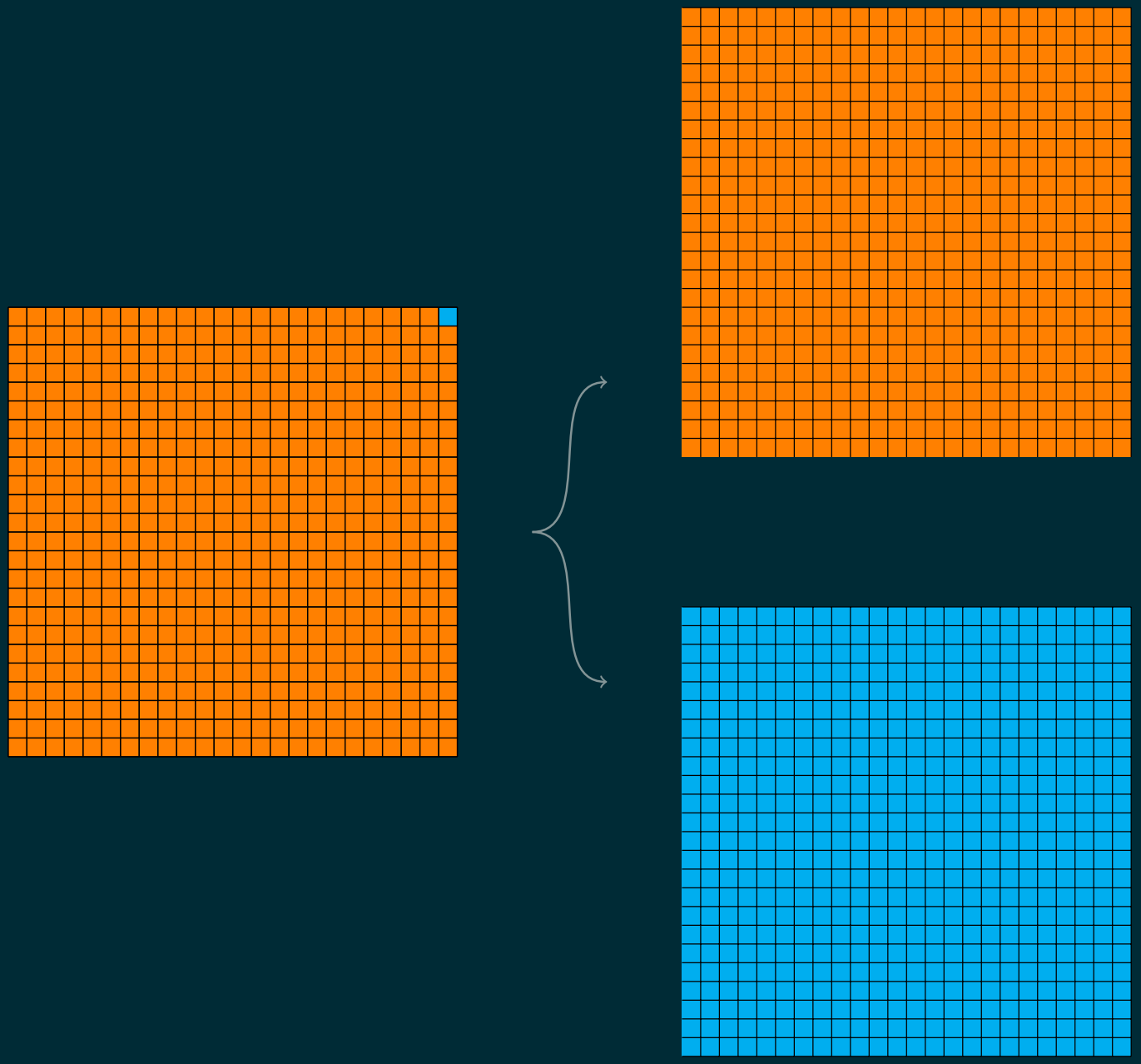


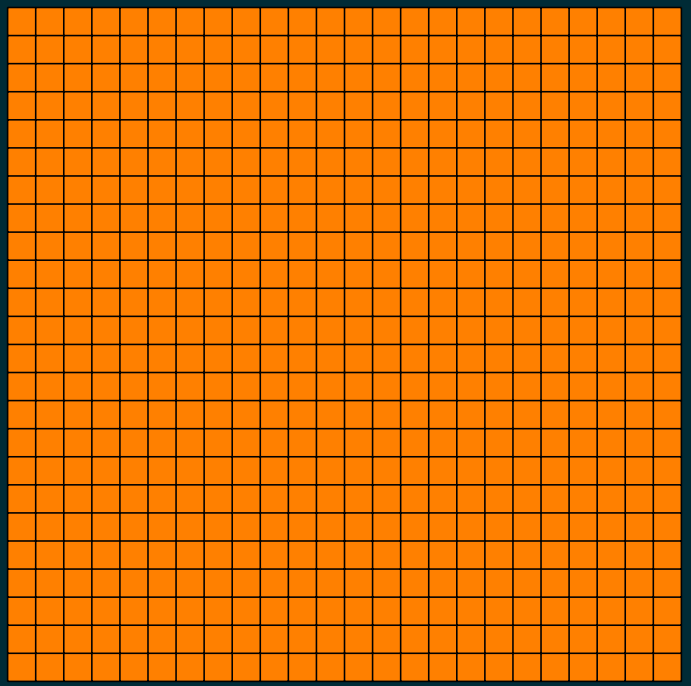


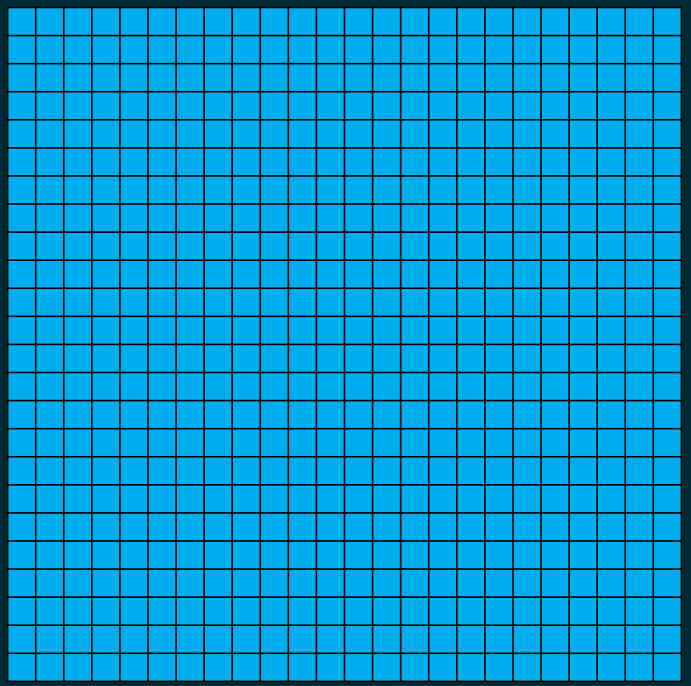
- ☑ Coursera Machine Learning.
- ☑ MA3604 Game Theory.
- ☑ NATCOR Stochastic Modeling.

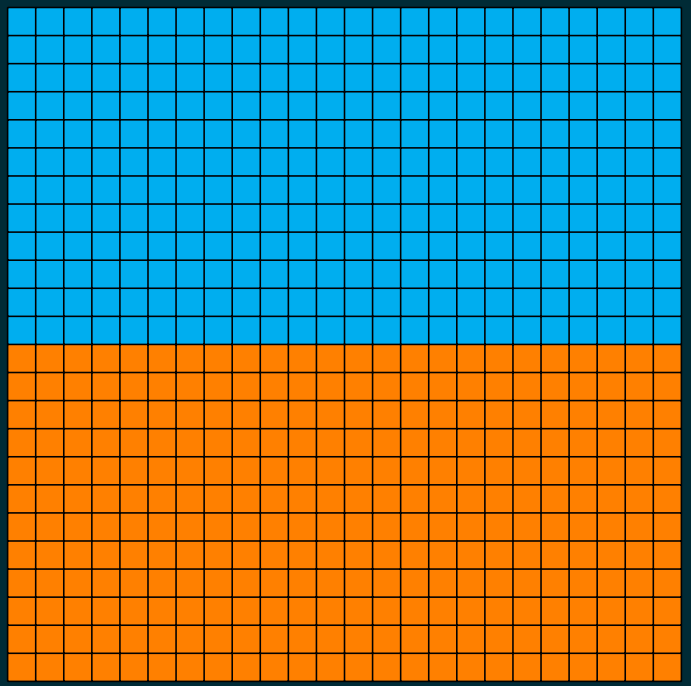
Evolutionary Game Theory

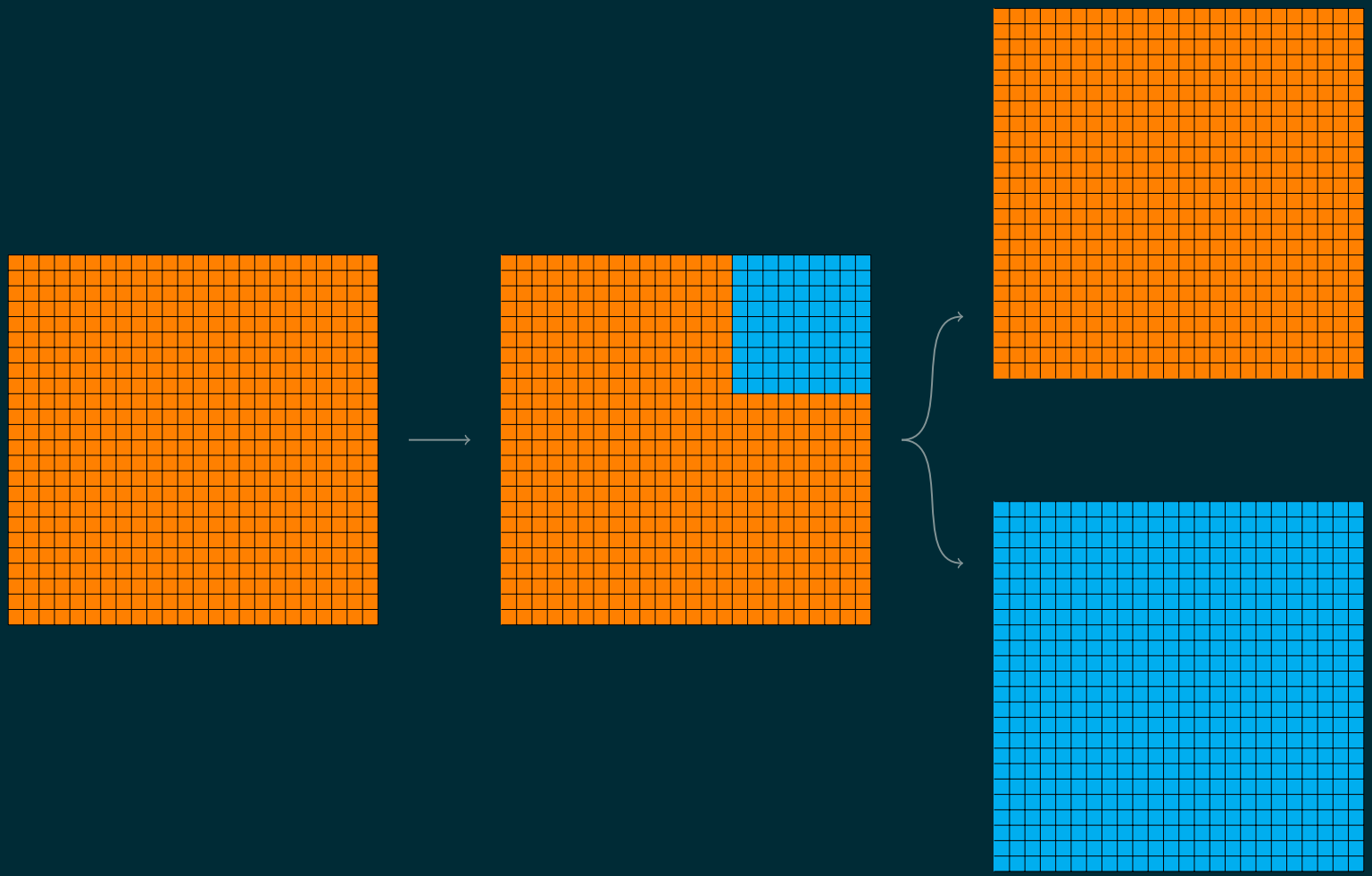
MA3604 Game Theory











$$u(\sigma, \chi) = su(S, \chi) + (1 - s)u(\bar{S}, \chi), \tag{1}$$

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$$u(S, \chi) = \theta(r, 1)H\theta(r, x)^{-\alpha} - \phi(r, 1)(1 - r)^{-\beta} - \psi(r, 1)F\psi(r, x)^{-\gamma}, \tag{2}$$

$$u(\sigma, \chi) = su(S, \chi) + (1 - s)u(\bar{S}, \chi), \tag{1}$$

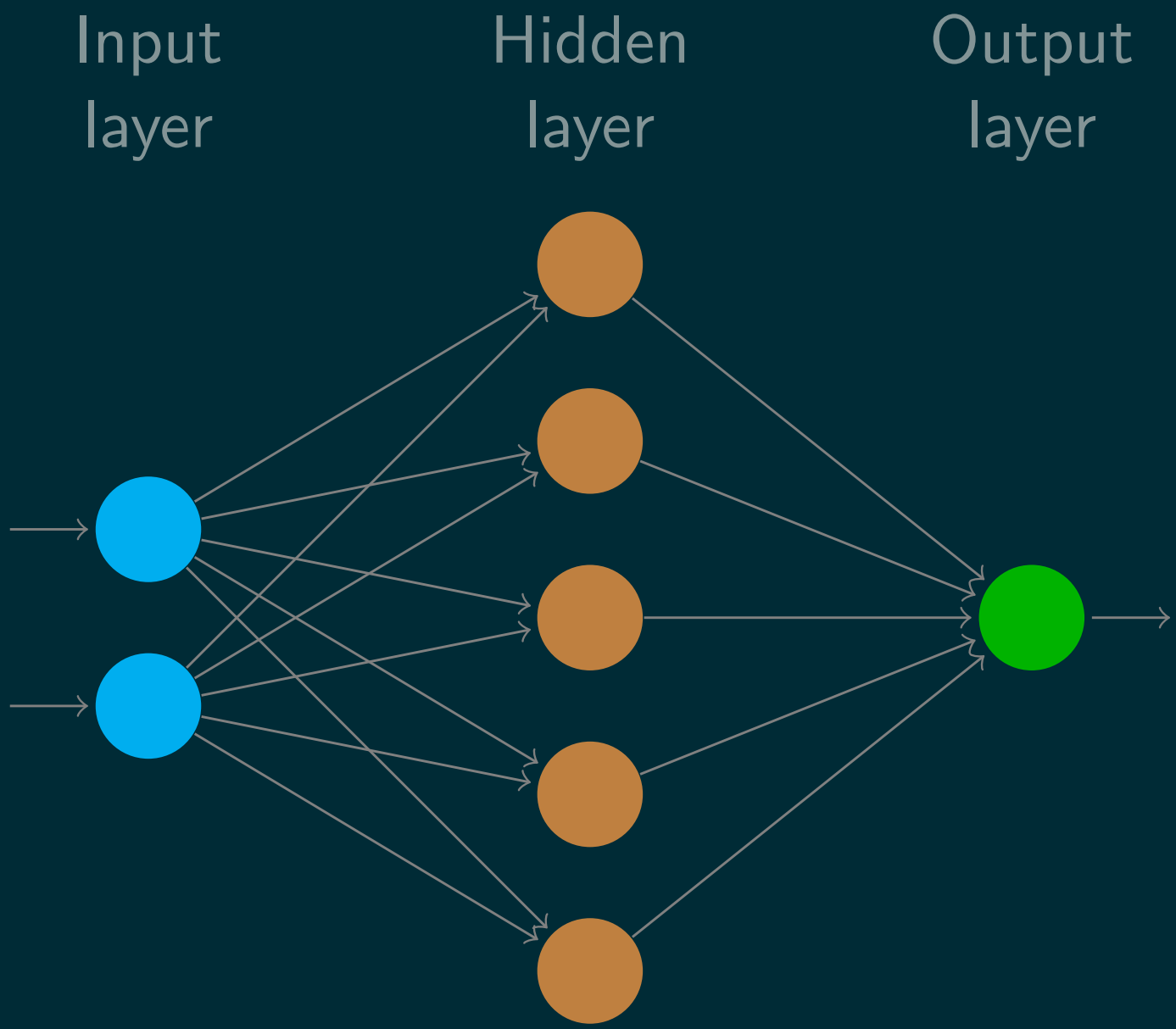
$$u(S, \chi) = \theta(r, 1)H\theta(r, x)^{-\alpha} - \phi(r, 1)(1 - r)^{-\beta} - \psi(r, 1)F\psi(r, x)^{-\gamma}, \tag{2}$$

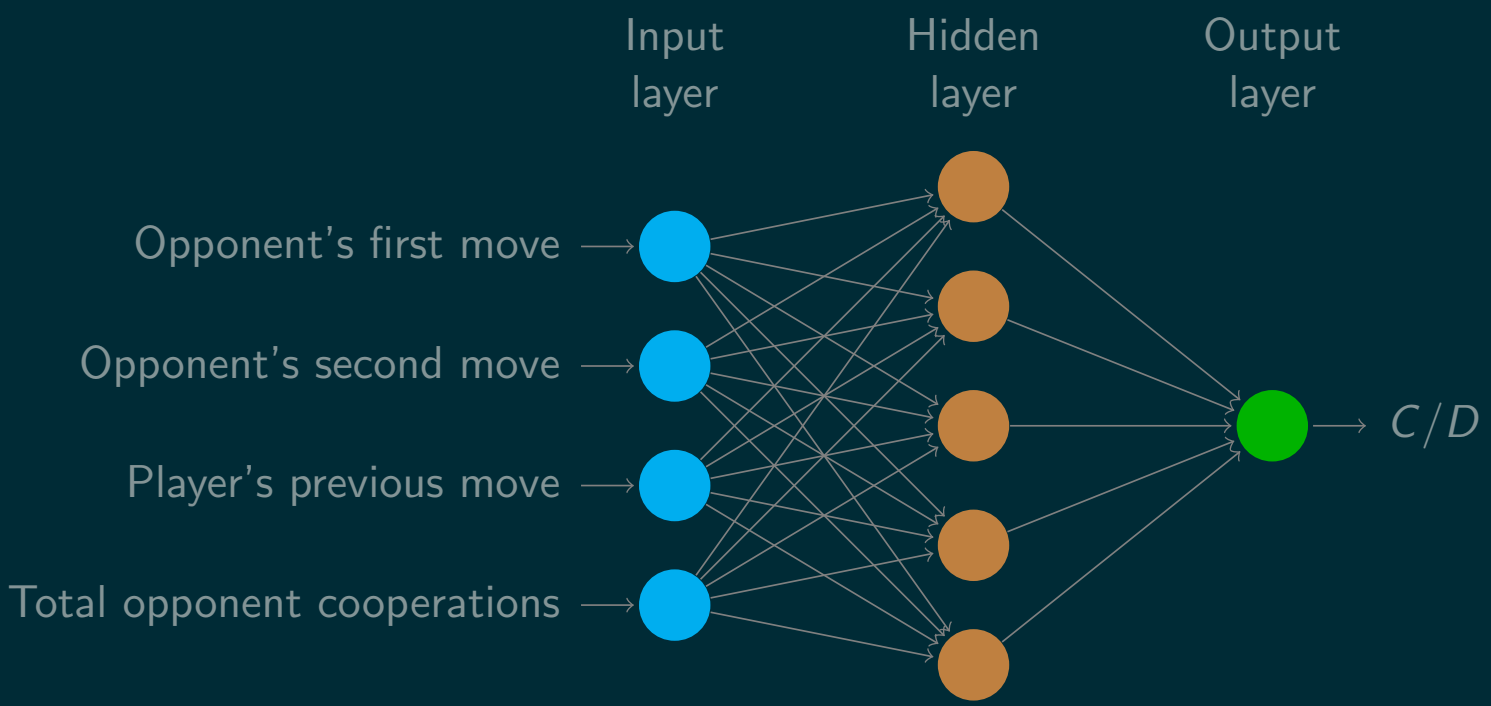
$$u(\bar{S}, \chi) = \theta(r, 0)H\theta(r, x)^{-\alpha} - \phi(r, 0)(1 - r)^{-\beta} - \psi(r, 0)F\psi(r, x)^{-\gamma} \tag{3}$$

$$\sigma_S = (1,\ 0)$$
$$\sigma_N = (0,\ 1)$$
$$\sigma_M = (s^*,\ 1 - s^*)$$

Neural Networks

Coursera Machine Learning


Input
layer
Hidden
layer
Output
layer


Input layer
Hidden layer
Output layer
Opponent's first move
Opponent's second move
Player's previous move
Total opponent cooperations
C / D

- ☐ Summer School on Network Theory
- ☐ NATCOR Simulation.
- ☐ NATCOR Combinatorial Optimisation.

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