Pausetta Briscola?

A Reinforcement Learning approach in order to teach an agent how to play the italian popular card Game Briscola

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Presented To:

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Overview

The Game

Turn-based

Imperfect information

Stochastic

Multi-agent

Static

Discrete

Baseline Agents

RANDOM AGENT

GREEDY AGENT

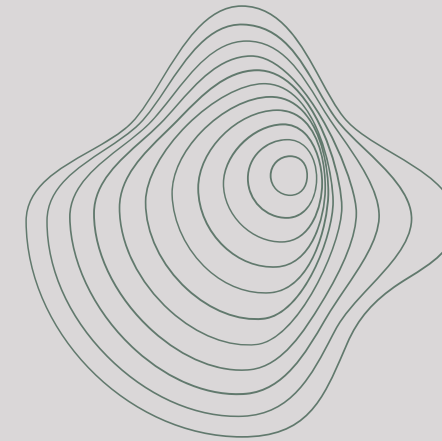**Random Action**
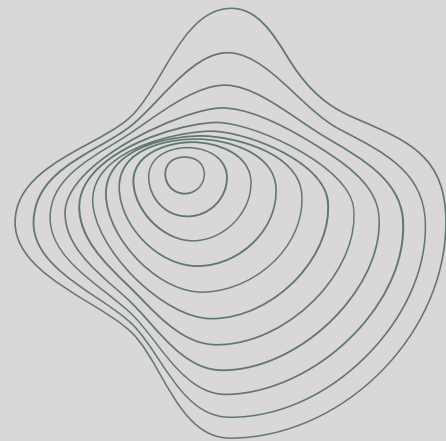
Min-Max Algorithm

State Representation

Game parameters:

- The leading suit (Briscola)
- The card in the agent's hand
- The card in play
- The cards already played
- Player points
- Opponent's points

Q-Agent

Training of the agent

Opponents	Rewards	Loss
Randomly chosen in each episode between the baseline agents	End of the hand: Points Gained Normalized End of the episode: 1 for win and 0 for loss	L1-loss Bellman Equation

Network Architecture

Hyperparameters

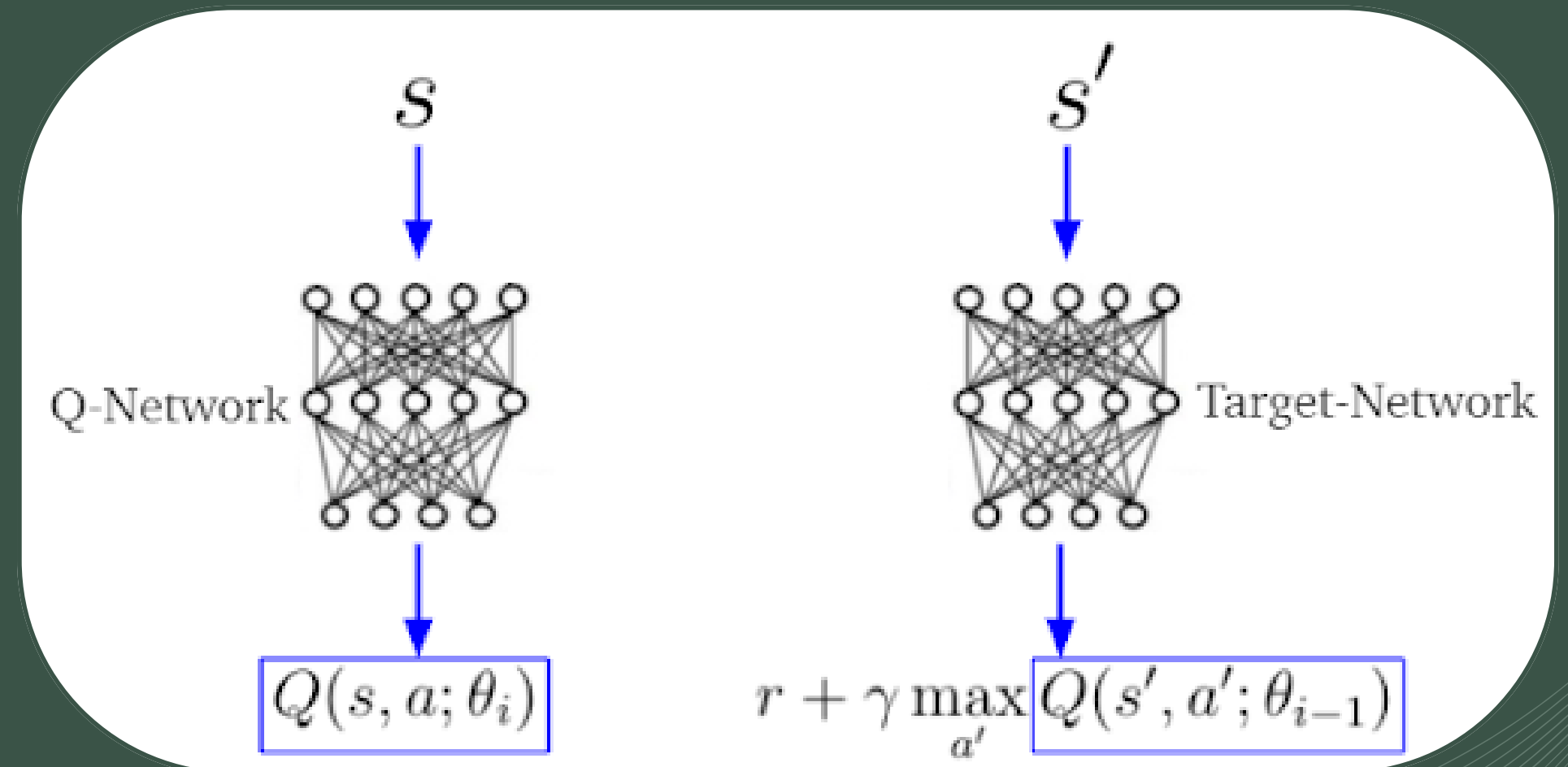Exploration vs Exploitation

Learning rate decay

Different agents trained

Reward

Parameters
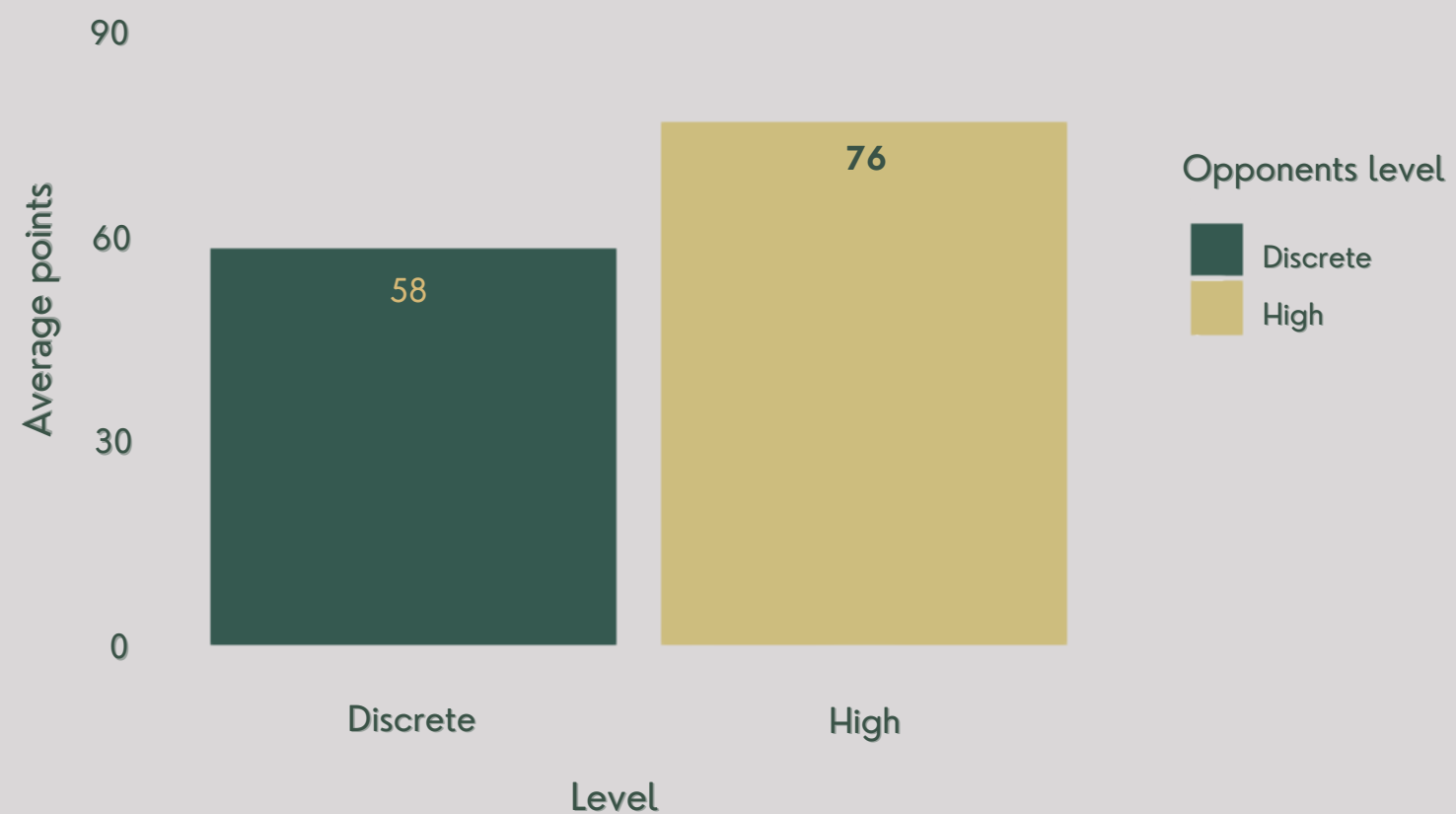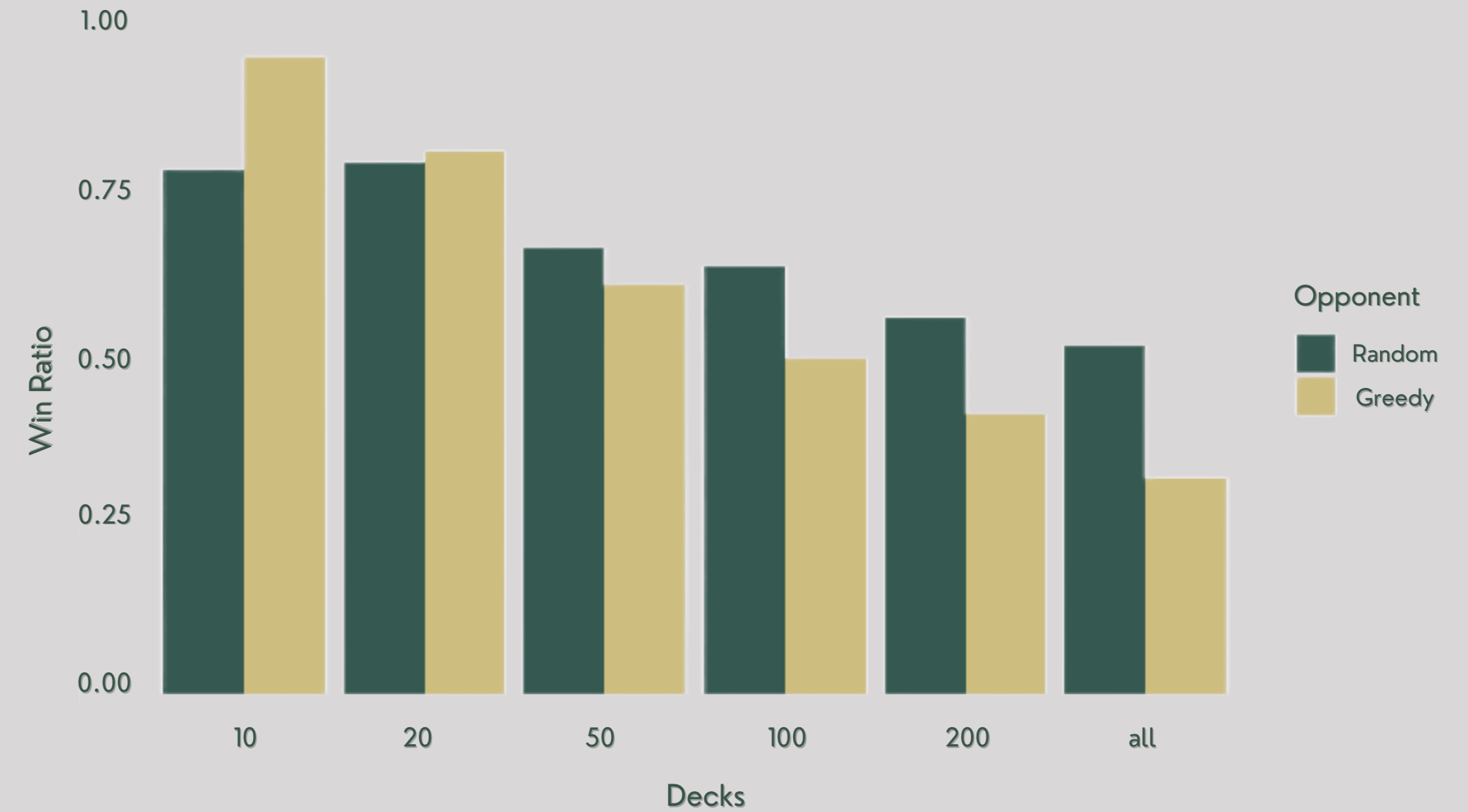
Four layers

RELU

Softmax mask

Results

Q-Agent. vs Random

Until 200 decks involved, better performance

Q-Agent vs Greedy

Until 50 decks involved, better performance

Q-Agent vs Human

Discrete level players and High level players

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Chiara Ferragni

Alcuni mi amano, alcuni mi odiano, ma tutti giocano con me a Pausetta Briscola.

Michel Scott

I want to get married and have 100 kids so I can have 100 friends and no one can say 'no' to playing Pausetta Briscola.

Greta Thunberg

The world is waking up, change is coming and not everyone is playing Pausetta Briscola yet?

Play with us