

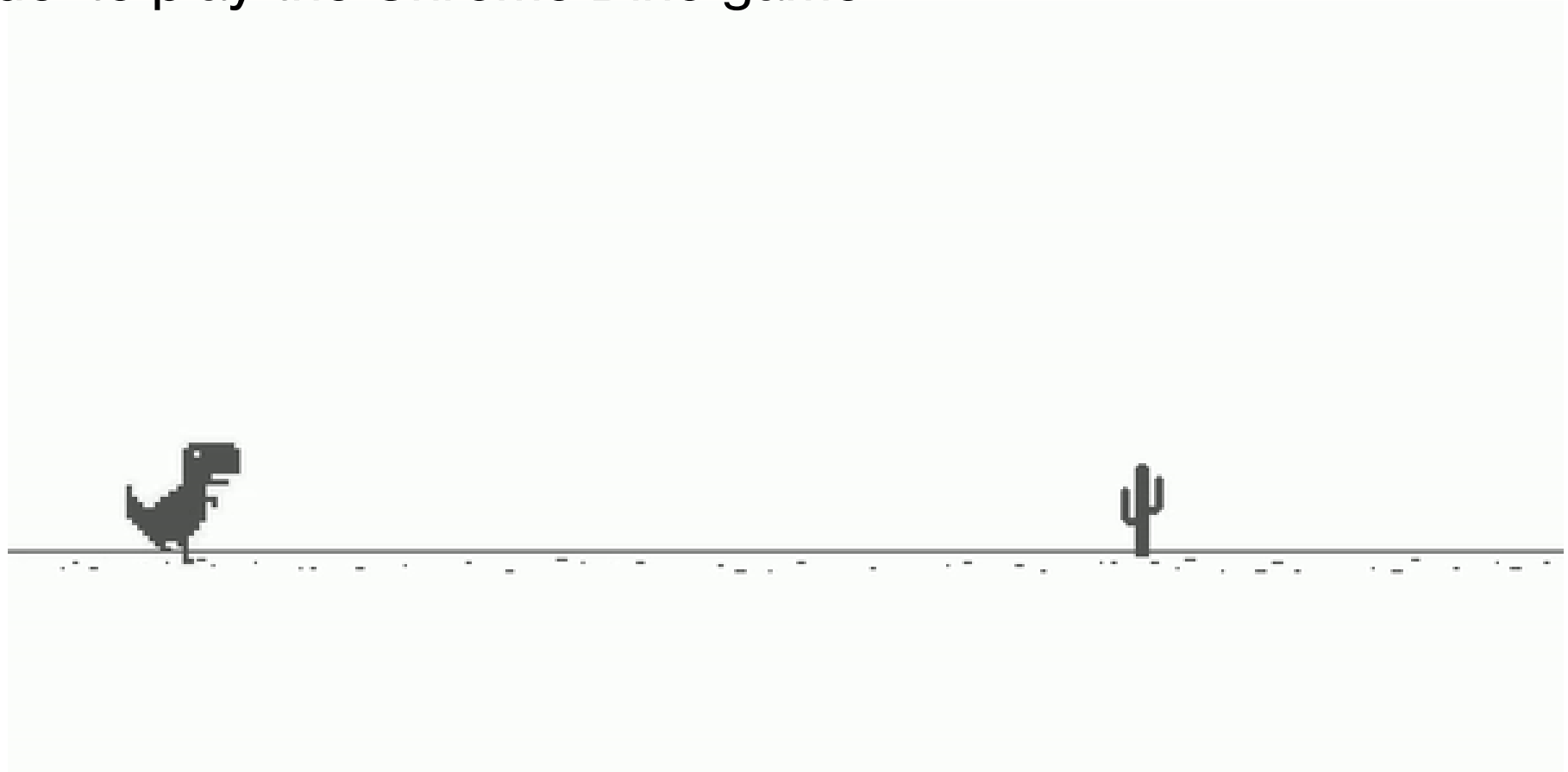


# Real Gaming Boy

Deep Reinforcement Learning in Chrome Dino Game

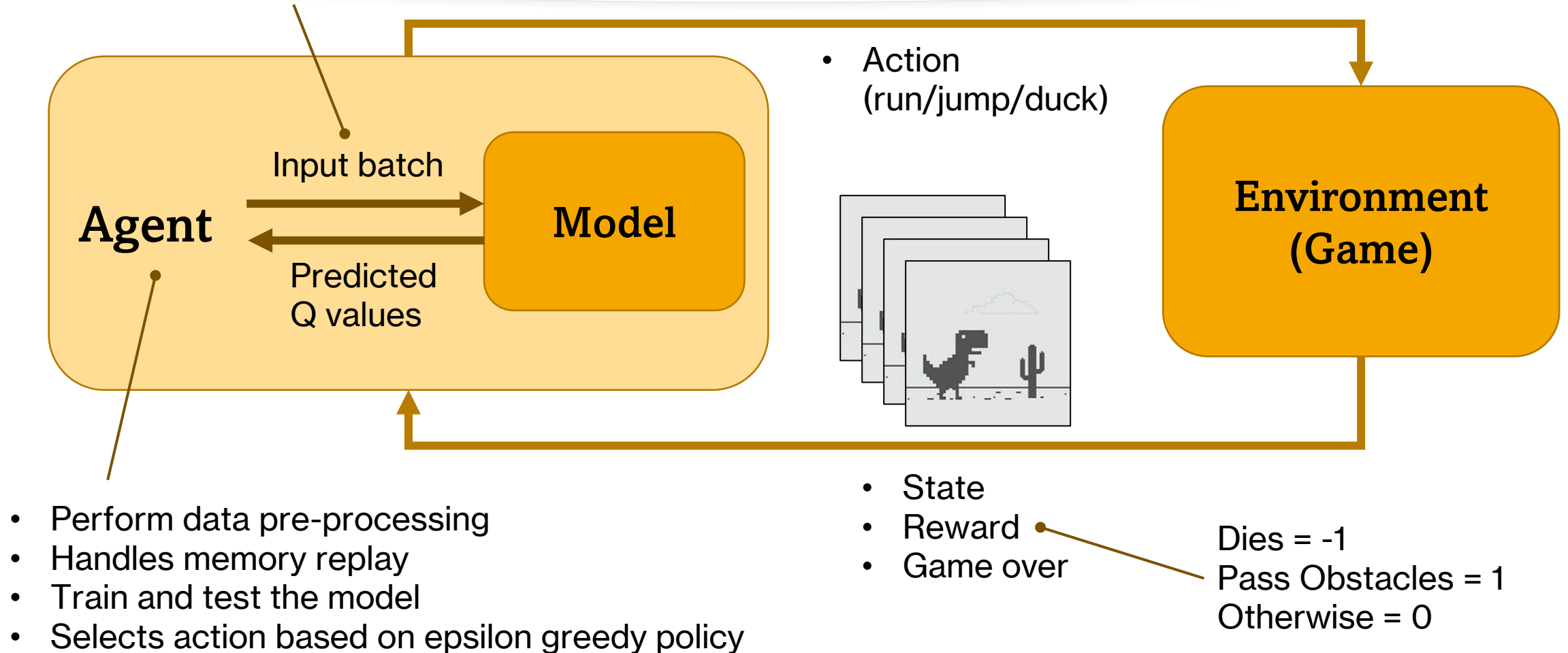
# Problem statement

- To train a model to play the Chrome Dino game



# Methodology: Deep Q Learning

(current state, reward, next state, game over)



# Methodology: Agent



## Training:

- Bellman's equation

$$Q(s, a) = r + \gamma \max_{a'} Q(s', a')$$

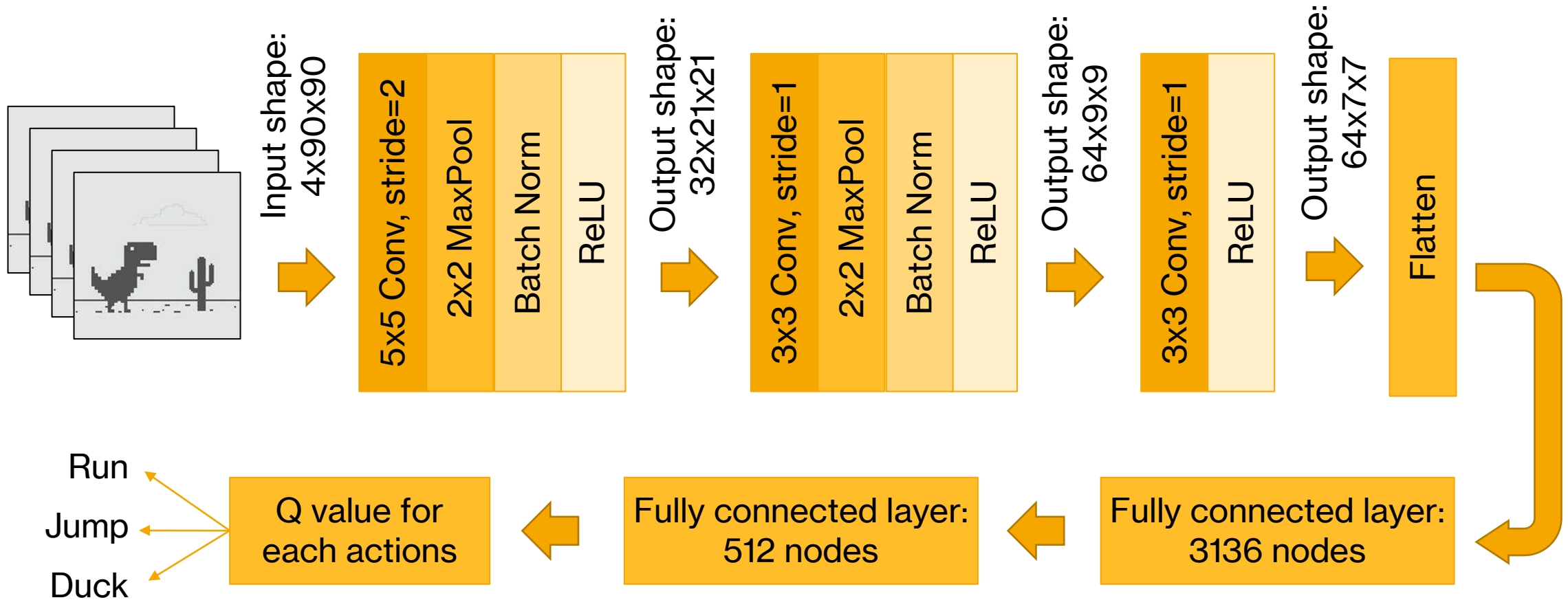
- Discount factor: 0.99

- Model will be far-sighted

- Mean Square Error  
between predicted and  
target Q value

- Adam optimizer (lr = 1e-4)

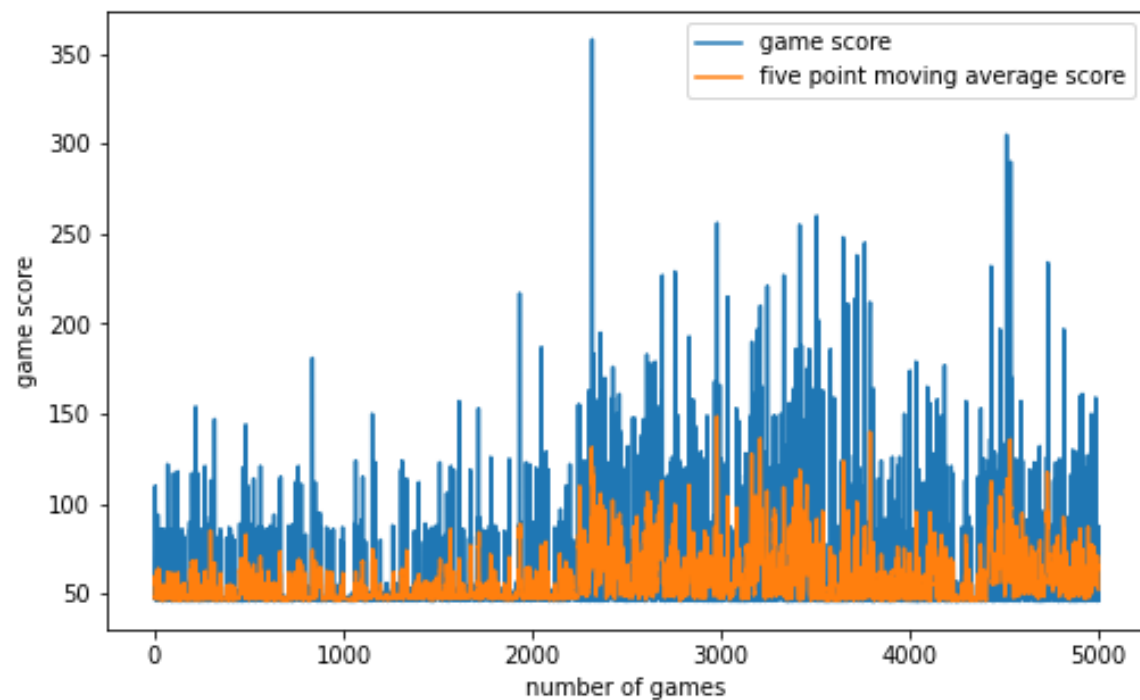
# Methodology: Deep Q Learning



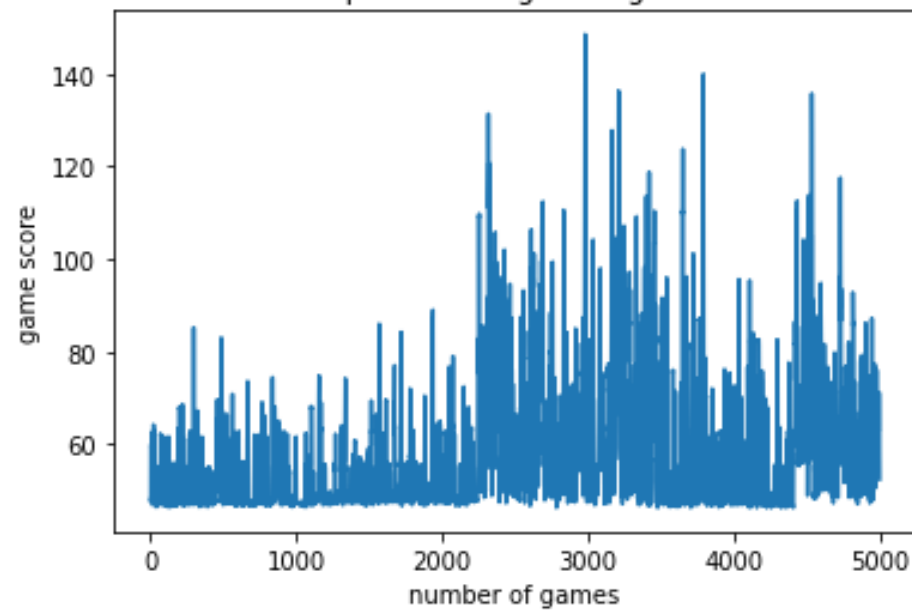
# Results



Model Performance



Five point moving average score



# **Q&A session**

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