

# Q-Learning

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# **Chapter 1**

## **Introduction**

# Chapter 2

## Background

### 2.1 Tic-Tac-Toe

Tic-Tac-Toe is a simple two-player game on a 3 by 3 grid. The game originated in ancient Egypt atleast 1300 BC. Players take turns placing X's and O's in the grid with the goal of getting 3 in a row. The game is drawn with perfect play from both sides, but O's have to be precise to garantee a draw.

### 2.2 Q-Learning

# Chapter 3

## Tic Tac Toe Q-Learning

# Chapter 4

## Deep Q-Learning

# **Chapter 5**

# **Conclusion**

# **Chapter 6**

# **Bibliography**