#### **Al Poker Tutorial**

Max Chiswick

2024-05-28

#### Table of contents

Ho	Home	
ı	Intro	5
1	Intro and Poker Foundations	6
2	Poker and Trading         2.1       Test layer 2          2.1.1       Test layer 3          2.2       Test layer 2 again	<b>7</b> 7 7
3	Python Foundations and Hello Poker Poker Math	8
II	Game Theory and Decision Making	9
4	Game Theory Foundations	10
5	Decision Making Under Uncertainty	11
6	Toy Poker Games and Optimization	12
7	Game Trees	13
Ш	CFR and Solvers	14
8	Counterfactual Regret Minimization (CFR)	15
9	Monte Carlo Methods	16
10	Solvers and Poker Strategy	17
IV	Machine Learning and Deep Learning	18
11	Machine Learning Math	19

12 Machine Learning	20
13 Deep Learning	21
14 Reinforcement Learning	22
V Al Poker Today	23
15 Al Poker Agents	24
16 Recent Al Advances	25
VI Advanced Topics	26
17 Opponent Modeling	27
18 Transformers and LLMs with PokerGPT	28
19 AI Risks and Safety	29
VII Projects	30
20 Projects	31

#### Home

This is a Quarto book.

To learn more about Quarto books visit https://quarto.org/docs/books.

Part I

Intro

#### 1 Intro and Poker Foundations

This is a book created from markdown and executable code.

### 2 Poker and Trading

#### 2.1 Test layer 2

#### 2.1.1 Test layer 3

#### 2.2 Test layer 2 again

abc

abc abc

abcabc

abcabc

abcabc

abcabc

 ${\bf abcabc}$ 

abcabc

abcabc

abcabc

abcabc

abcabc

abcabc

abc

 $E = mc^2$ 

### 3 Python Foundations and Hello Poker Poker Math

This is a book created from markdown and executable code.

# Part II Game Theory and Decision Making

#### **4 Game Theory Foundations**

This is a book created from markdown and executable code.

#### 5 Decision Making Under Uncertainty

This is a book created from markdown and executable code.

#### 6 Toy Poker Games and Optimization

This is a book created from markdown and executable code.

#### 7 Game Trees

This is a book created from markdown and executable code.

# Part III CFR and Solvers

#### 8 Counterfactual Regret Minimization (CFR)

This is a book created from markdown and executable code.

#### 9 Monte Carlo Methods

This is a book created from markdown and executable code.

#### 10 Solvers and Poker Strategy

This is a book created from markdown and executable code.

# Part IV Machine Learning and Deep Learning

#### 11 Machine Learning Math

This is a book created from markdown and executable code.

### 12 Machine Learning

This is a book created from markdown and executable code.

### 13 Deep Learning

This is a book created from markdown and executable code.

### 14 Reinforcement Learning

This is a book created from markdown and executable code.

# Part V Al Poker Today

### 15 Al Poker Agents

This is a book created from markdown and executable code.

#### 16 Recent Al Advances

This is a book created from markdown and executable code.

# Part VI Advanced Topics

### 17 Opponent Modeling

This is a book created from markdown and executable code.

#### 18 Transformers and LLMs with PokerGPT

This is a book created from markdown and executable code.

### 19 AI Risks and Safety

This is a book created from markdown and executable code.

Part VII

**Projects** 

### 20 Projects

This is a book created from markdown and executable code.

See Knuth (1984) for additional discussion of literate programming.

Knuth, Donald E. 1984. "Literate Programming." Comput. J. 27 (2): 97–111. https://doi. org/10.1093/comjnl/27.2.97.