# **Chess Soup**



**Gregory Marx, Metis 2019** 

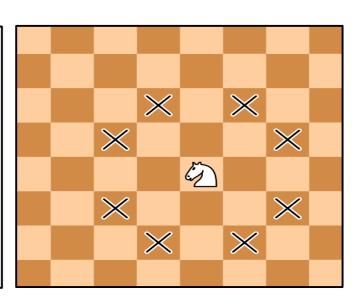
#### Methodology

WHITE PEXC () 1504			BLACK Roland	PAIRING NO.
	WHITE	BLACK	WHITE	BLACK
1	d4	d5	31 Khl	Re8
2	C4	e6	32 Bb5	Re 7
3	Nc3	NF6	33 a4	Kh7
4	Ba 5	Be7	34 Rel	Qc7
5	Bg 5	.h6	35 QXC7	RXC7
6	Bh4	0-0	36 h3	NF7
7	NF3	66	37 Rd1	Black Resign
8	cxd5	exd5	38	
9	Bd3	Be6	39  -	Ø
10	0-0	Nbd7	40	
11	RCI	c5	41	
12	dxc5	bxc5	42	
13	b3	N66	43	
14	Ne5	ab	44	
15	Ncb	Qe7	45	
16	Nxe7+	Qxe7	46	
17	Qf3	95	47	
18	0.3	May	48	

Obtained digital score sheets from chess games played on Lichess.org

#### Methodology

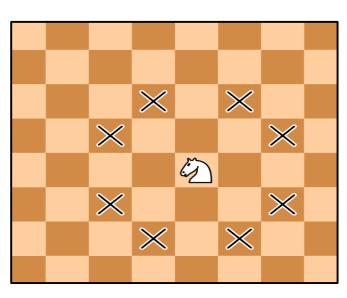
WH	TE Peter O	1504	BLACK Roland	PAIRING NO.
	WHITE	BLACK	WHITE	BLACK
1	d4	d5	31 Khl	Re8
2	c4	e6	32 Bb5	Re 7
3	Nc3	NF6	33 a4	Kh7
4	Ba 5	Be7	34 Rel	Qc7
5	e3	.h6	35 Qxc7	RXC7
6	Bh4	0-0	36 h3	NF7
7	NF3	66	37 Rd1	Black Resigns
8	cxd5	exd5	38	0
9	Bd3	Be.6	39 1-1	Ø
10	0-0	Nbd7	40	
11	RCI	c5	41	
12	dxc5	bxc5	42	
13	b3	N 66	43	
14	Ne5	ab	44	
15	NC6	Qe7	45	
16	Nxe7+	Qxe7	46	
17	Qf3	95	47	
18	093	14 p	48	

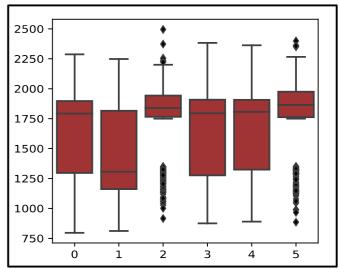


# Recorded location and attacks for every piece after every turn

#### Methodology

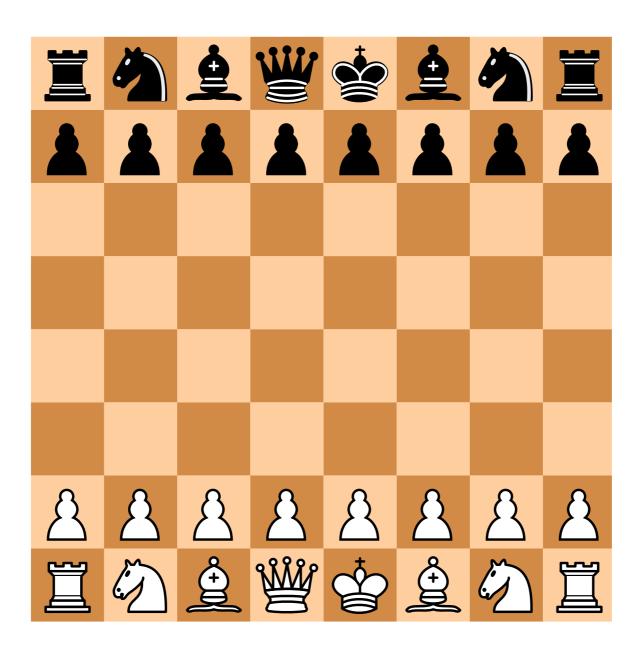
WHI	TE Peter O	1504	BLACK Roland PAIRING NO.
	WHITE	BLACK	WHITE BLACK
1	d4	d5	31 Khl Re8
2	c4	e6	32 Bb5 Re7
3	Nc3	NF6	33 a4 Kh7
4	Ba 5	Be7	34 Rei Qc7
5	e3	.h6	35 QXC7 RXC7
6	Bh4	0-0	36 h3 NF7
7	NF3	66	37 Rdl Black Resigns
8	cxd5	exd5	38
9	Bd3	Be.6	39 1-0
10	0-0	Nbd7	40
11	RCI	c5	41
12	dxc5	bxc5	42
13	b3	N66	43
14	Ne5	a6	44
15	Ncb	Qe7	45
16	Nxe7+	Qxe7	46
17	Qf3	a5	47
18	093	1894	48



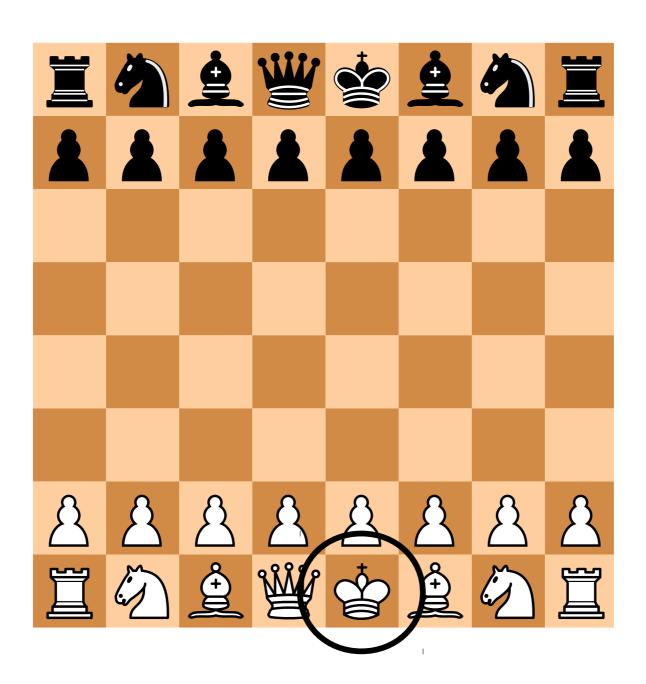


# Implemented a clustering algorithm to isolate groups of strong players

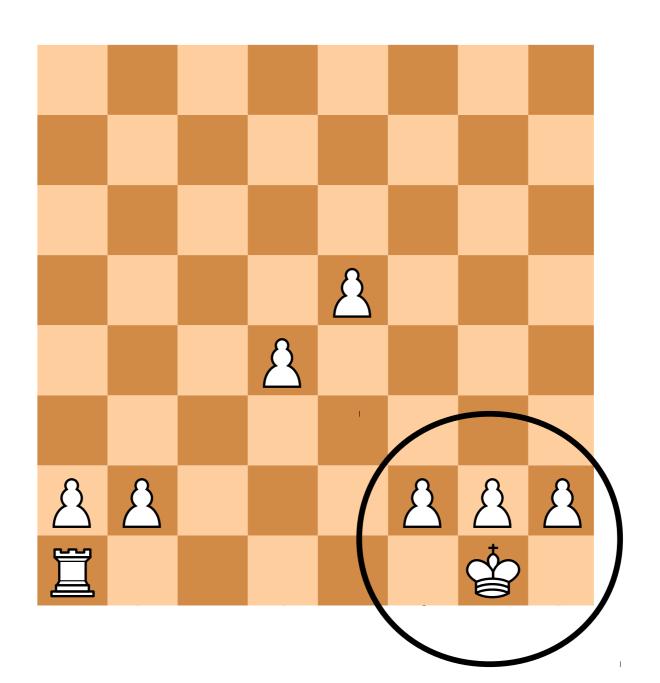
#### **Starting board**



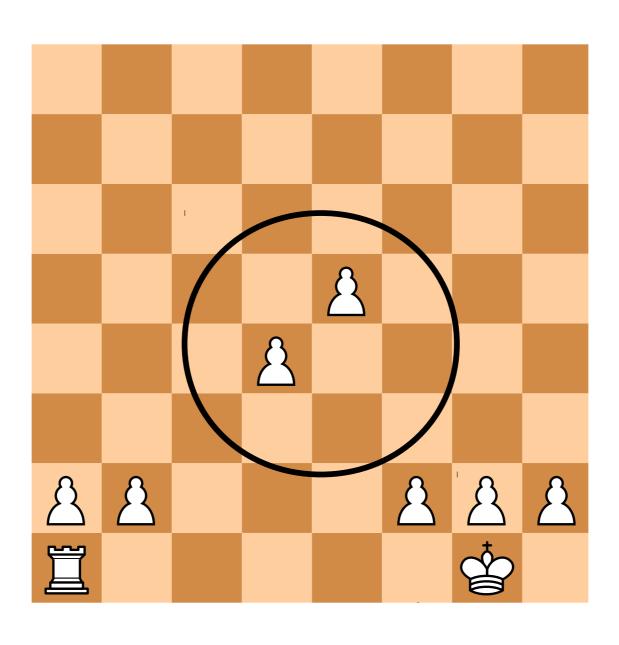
#### **Starting board**



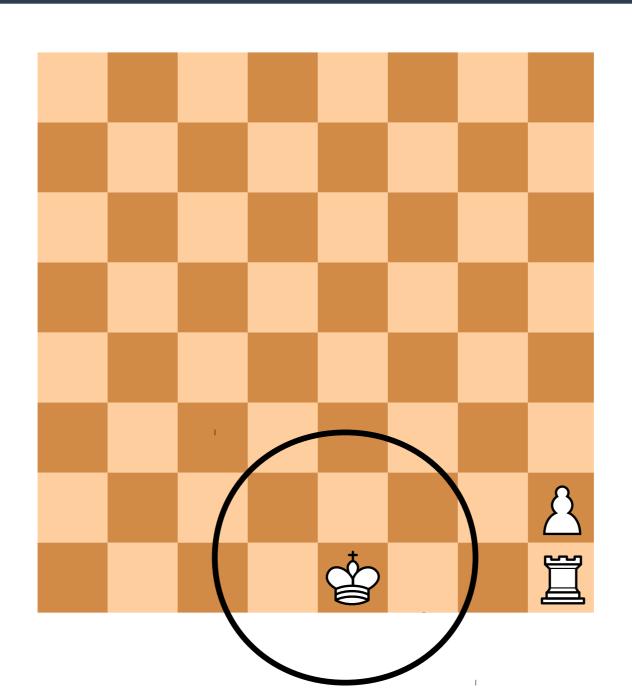
# Good piece placement



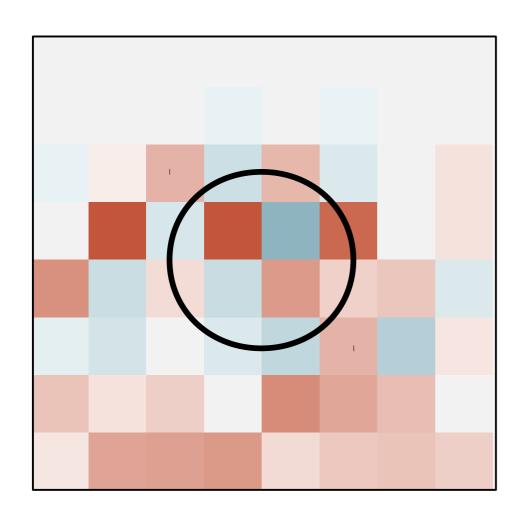
# Good piece placement

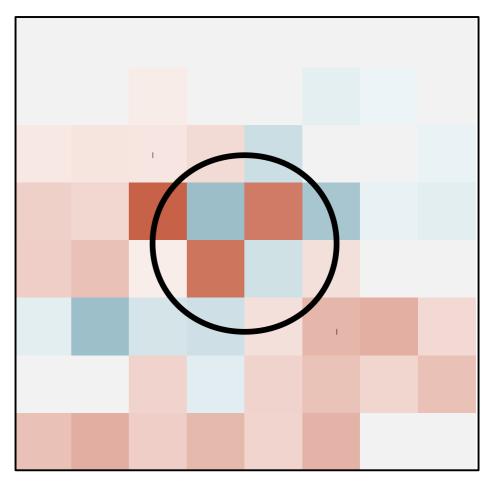


# **Bad piece placement**

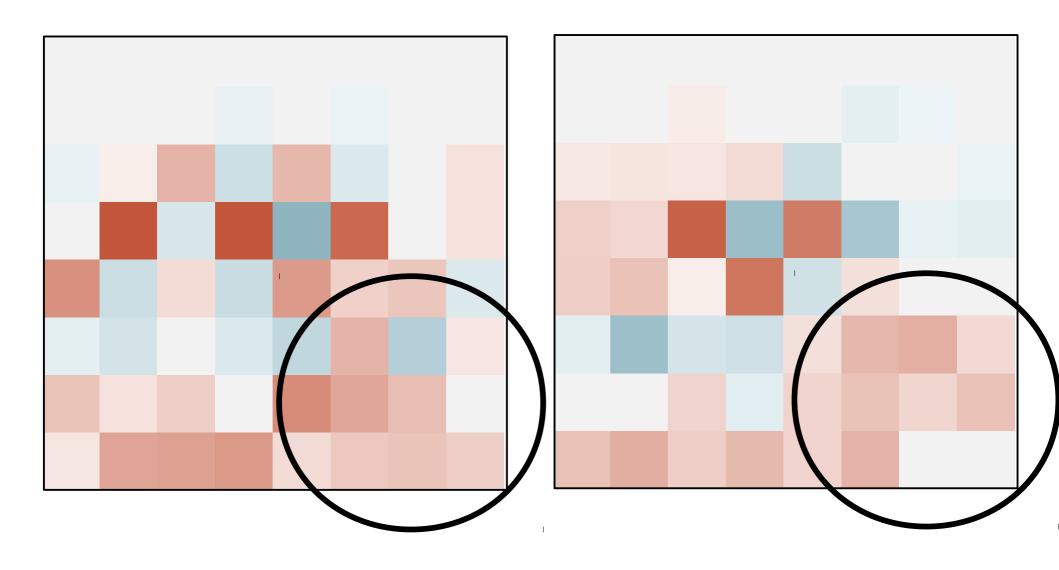


## **Good board control**

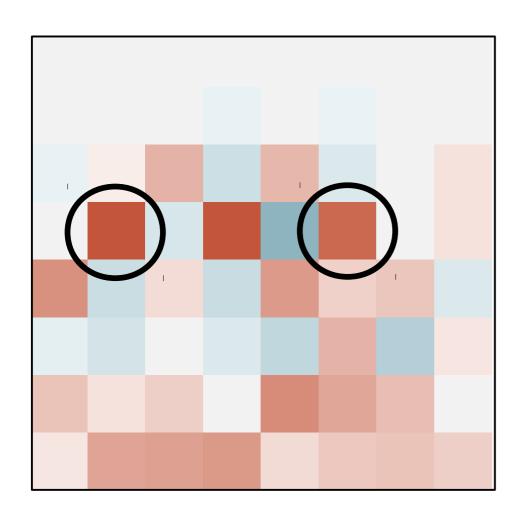


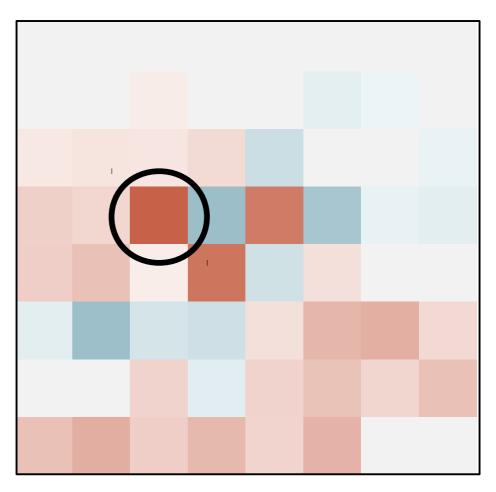


#### **Good board control**

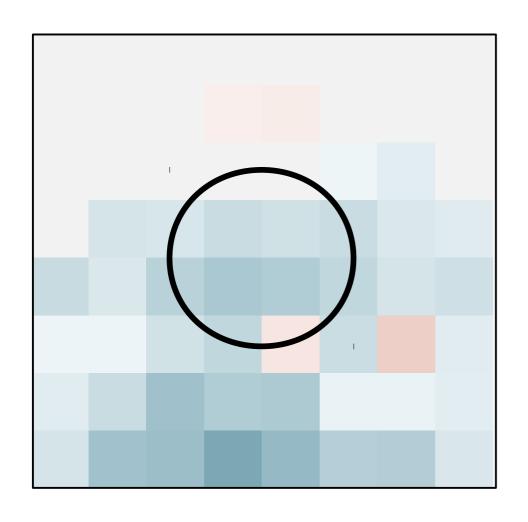


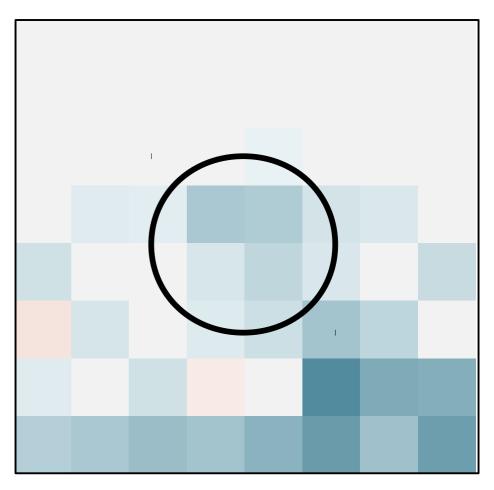
#### **Good board control**





#### **Bad board control**





#### Piece placement:

Piece placement:

1) Put your king in the right corner

#### Piece placement:

- 1) Put your king in the right corner
- 2) Fix the pawns in front of the king

#### Piece placement:

- 1) Put your king in the right corner
- 2) Fix the pawns in front of the king
- 3) Push your middle pawns

#### **Board control:**

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1) Activate your pieces quickly

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- 1) Activate your pieces quickly
- 2) Aim to control central squares

#### **Board control:**

- 1) Activate your pieces quickly
- 2) Aim to control central squares
- 3) Maintain control around your king