

AI FOR BLOKUS DUO

Zhao Hanye

ACM Class, 2017

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OVERVIEW

1. Intro

- Game Info
- Our Goals

2. Motivation

3. Model

4. Data and Method

5. Conclusion

INTRO

GAME INFO

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FIGURE 1: Blokus Duo

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- ▶ Two players drop tiles on a 14*14 square board

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- ▶ Each player has 21 different tiles

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- ▶ Two players drop tiles on a 14×14 square board
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- ▶ Flip and rotation are allowed

GAME INFO



FIGURE 1: Blokus Duo

- ▶ Two players drop tiles on a 14×14 square board
- ▶ Each player has 21 different tiles
- ▶ Corner to corner, but no edge to edge
- ▶ Flip and rotation are allowed
- ▶ The player who take up the most squares wins

OUR GOALS

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- ▶ Make AIs for Blokus Duo

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- ▶ Make AIs for Blokus Duo
- ▶ Traditional algorithms and reinforcement learning
- ▶ Different combinations lead different levels
- ▶ PVE and EVE system

MOTIVATION

PARAGRAPHS OF TEXT

Sed iaculis dapibus gravida. Morbi sed tortor erat, nec interdum arcu. Sed id lorem lectus. Quisque viverra augue id sem ornare non aliquam nibh tristique. Aenean in ligula nisl. Nulla sed tellus ipsum. Donec vestibulum ligula non lorem vulputate fermentum accumsan neque mollis.

Sed diam enim, sagittis nec condimentum sit amet, ullamcorper sit amet libero. Aliquam vel dui orci, a porta odio. Nullam id suscipit ipsum. Aenean lobortis commodo sem, ut commodo leo gravida vitae. Pellentesque vehicula ante iaculis arcu pretium rutrum eget sit amet purus. Integer ornare nulla quis neque ultrices lobortis. Vestibulum ultrices tincidunt libero, quis commodo erat ullamcorper id.

MODEL

VERBATIM

EXAMPLE (THEOREM SLIDE CODE)

```
\begin{frame}  
\frametitle{Theorem}  
\begin{theorem}[Mass--energy equivalence]  
$E = mc^2$  
\end{theorem}  
\end{frame}
```

T_EX



Department of Decision Sciences and
Managerial Economics
The Chinese University of Hong Kong

- ▶ T_EX was created by Donald Knuth in 1978
- ▶ A typesetting macro language and compiler:
 - ▶ Readable mathematics
 - ▶ Better hyphenation
 - ▶ Optimized justification
 - ▶ Font management tools
 - ▶ Cross-compatibility
- ▶ Code – Compile – Visualize

DATA AND METHOD

FIGURE



FIGURE 2: CUHK Business School

EDITORS AND COMPILERS

- ▶ To install in your machine
 - ▶ Check `latex-project.org`
- ▶ In the cloud
 - ▶ ShareLatex : `www.sharelatex.com`
 - ▶ Overleaf : `www.overleaf.com`

PLEASE GIVE ME MB OF SPACE ON OVERLEAF

<https://www.overleaf.com/signup?ref=d1806010dac8>

MULTIPLE COLUMNS

Heading

1. Statement
2. Explanation
3. Example

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer lectus nisl, ultricies in feugiat rutrum, porttitor sit amet augue. Aliquam ut tortor mauris. Sed volutpat ante purus, quis accumsan dolor.

CONCLUSION

TABLE AND EQUATION

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

TABLE 1: Table caption

$$\begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & \ddots & \vdots \\ a_{n1} & \cdots & a_{nn} \end{bmatrix}^T = \begin{bmatrix} a_{11} & \cdots & a_{n1} \\ \vdots & \ddots & \vdots \\ a_{1n} & \cdots & a_{nn} \end{bmatrix} \quad (1)$$

REFERENCES



John Smith (2012)

Title of the publication

Journal Name 12(3), 45 – 678.

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