

# Gateway

*A Creative Game Experience*

逃過一劫

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A person's hands are shown holding a black video game controller, positioned in front of a large computer monitor. The monitor displays a game with a greenish, abstract landscape. The room is dimly lit, with a small potted plant visible on the left and a window with blinds in the background. A semi-transparent dark blue rectangle is overlaid on the center of the image, containing the text "First Introduction".

# First Introduction

# OUR TEAM

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李政懋

Build up GUI  
Integrate model and data



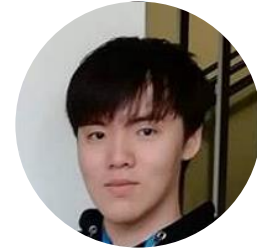
陳麒宇

Build activity recognition CNN model



張伯豐

Data collection and analysis



孫茂勛

Setup camera setting  
UI design

# Our Goals

1. Improve interactions between players
2. Transmit tactic immediately



# ■ Reflect teammate's emotions immediately

Reflect each player's emotions as game going

Emotion recognition:

- angry
  - disgust
  - fear
  - happy
  - sad
  - surprise
  - neutral
-



# Advantages



ONE SENTENCE MAY REPRESENT  
DIFFERENT EMOTIONS



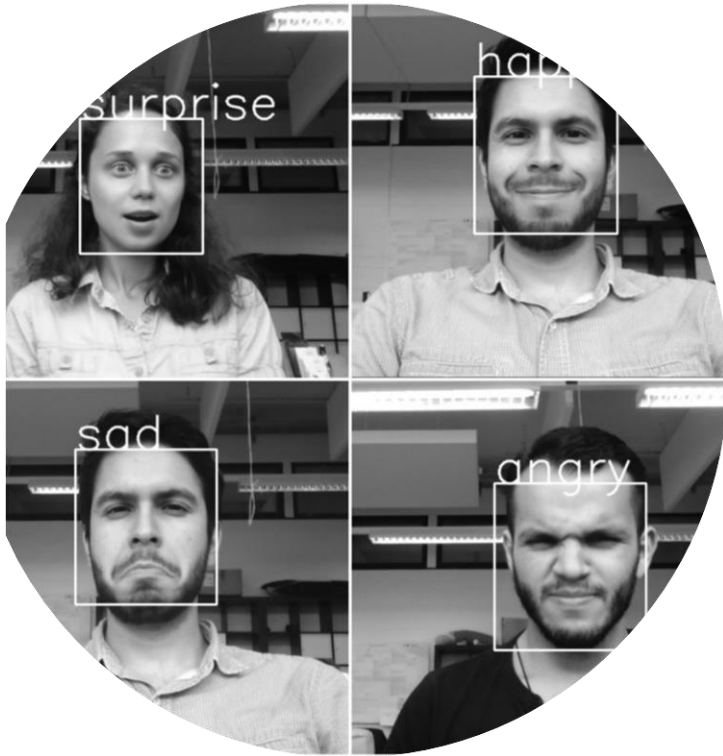
DON'T HAVE TO CONVEY  
EMOTIONS THROUGH WORDS



IMPROVE INTERACTIONS  
BETWEEN PLAYERS

# Goal 1

## ■ Model



- Proposed by B-IT-BOTS robotics team
- Use fer2013 emotion classification datasets
- Keras CNN model + OpenCV
- Real-time detection



# ■ Transmit tactics immediately by player's movements

- Transmit message without using hands
- Turn left/right, left down, right down, and forward
- Each movement corresponds to an instruction

## Advantages

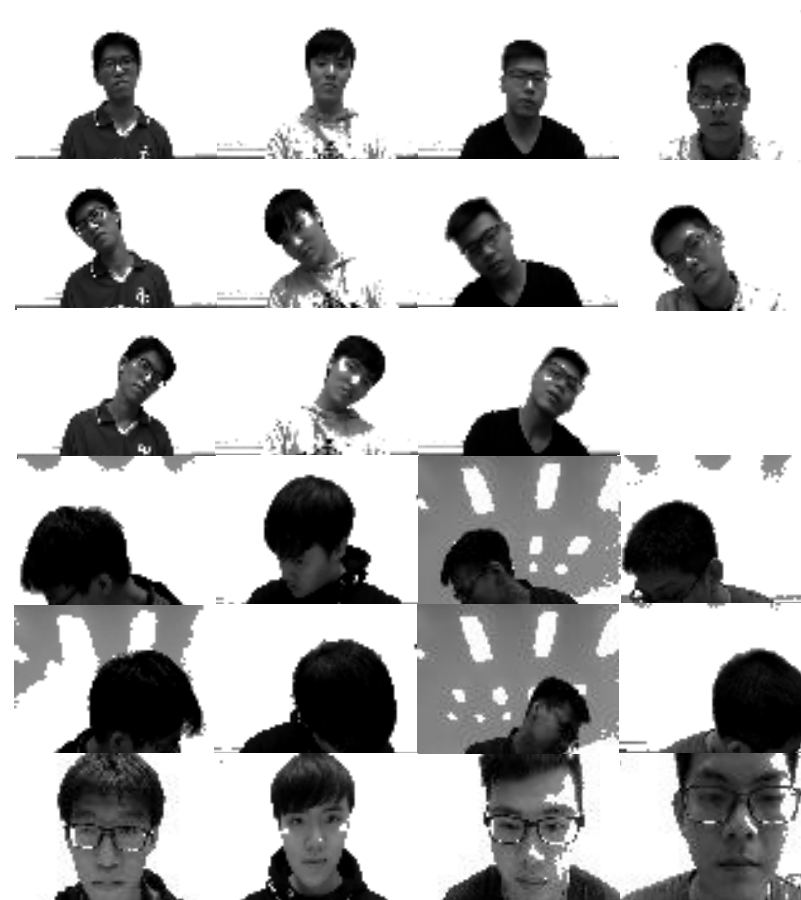
- Save typing time
  - Even if the game is equipped with chat software, the player is not necessarily able to use it
  - Use simple and clear illustration can avoid poor communication
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A person with short blonde hair is seen from the back, wearing a black and red gaming headset. They are looking at a computer monitor which displays a colorful game interface, possibly a sports game. The background is blurred, showing other people in a room. A dark blue rectangular overlay is positioned in the center-right of the image, containing the text 'Second Method' in white.

# Second Method

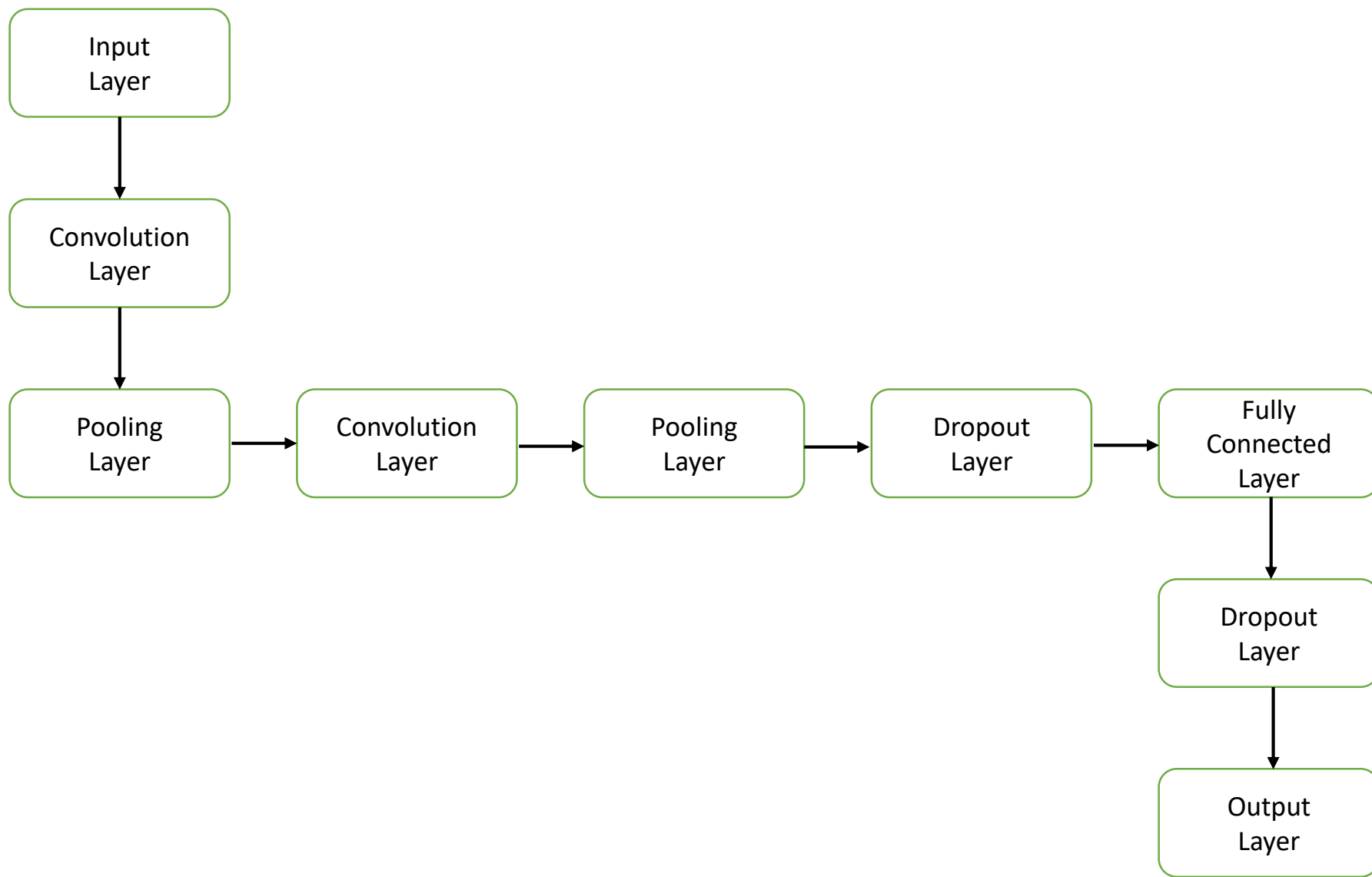
# Model

- Construct our own dataset
- Keras CNN model + OpenCV
- Real-time detection





# Model





# Third

Feature work



## ■ Feature work

- Complete datasets
  - Add new movements
  - Improve model accuracy
  - Reflect player's emotions on the character in the game
  - Add a menu to select the corresponding communication between player's movements and illustrations
  - Adjust the direction of tactical according to the direction teammates facing
  - Add sound effects for each tactic
  - Only transmit the illustrations when pressing a specific button
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THANK YOU