

Gateway

A Creative Game Experience

逃過一劫

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[CONTENT]

1 Introduction

2 Method

3 Feature work

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 green and blue landscape. The room is dimly lit, with a small potted plant visible on the left. A semi-transparent dark blue rectangle is overlaid on the center of the image, containing the text "First Introduction" in white.

First Introduction

OUR TEAM



李政懋

Build up GUI
Integrate model and data



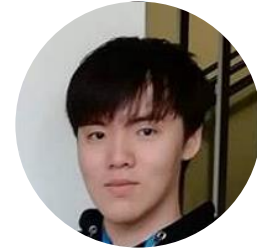
陳麒宇

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



Goal 1

■ Reflect teammate's emotions immediately

Reflect each player's emotions as game going

Advantages



ONE SENTENCE MAY REPRESENT
DIFFERENT EMOTIONS



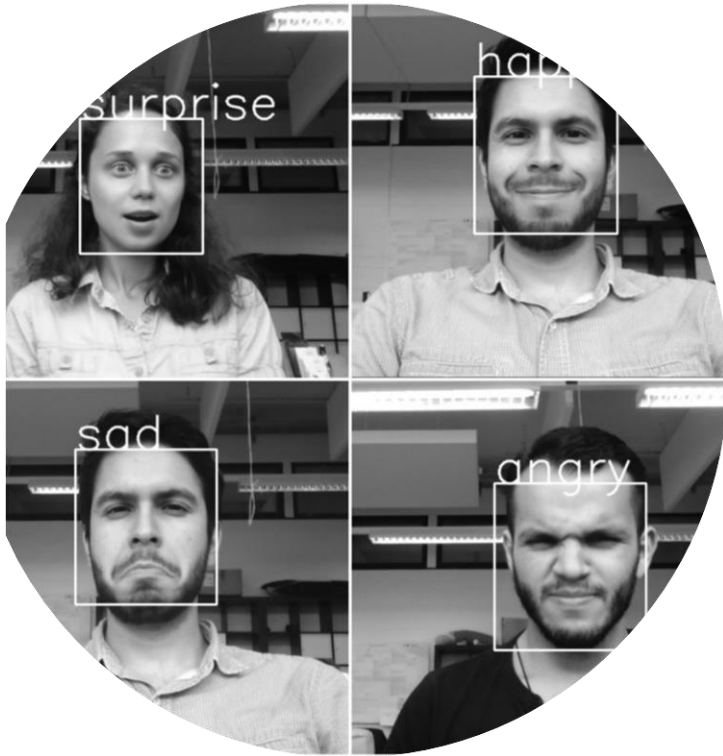
DON'T HAVE TO CONVEY
EMOTIONS THROUGH WORDS



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

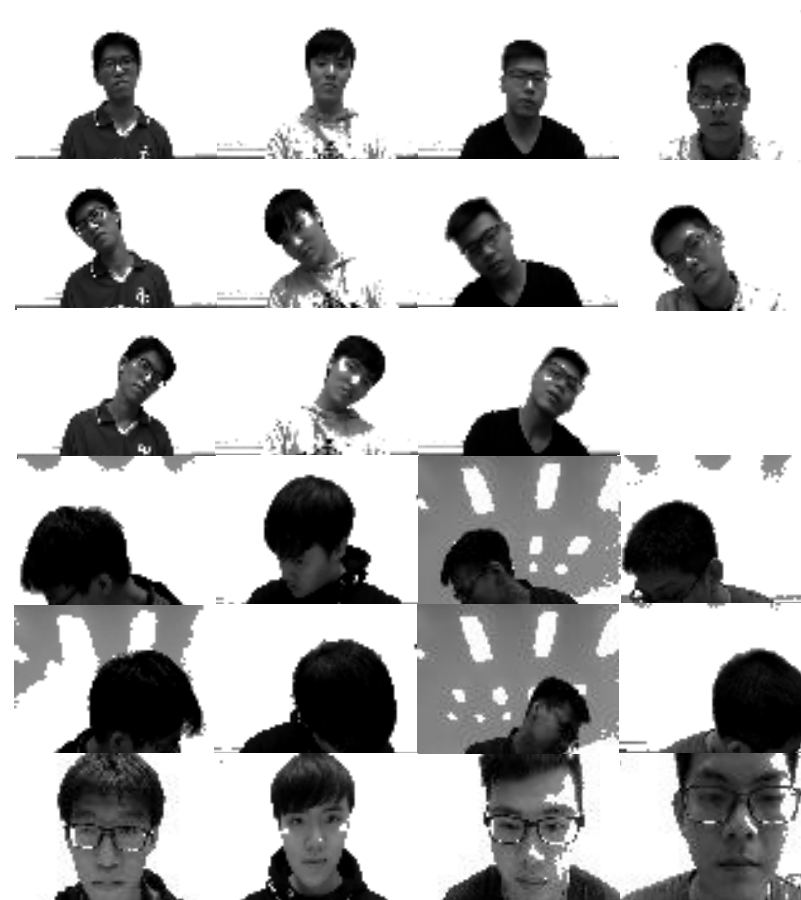
- Save typing time
 - Even if the game is equipped with chat software, the player is not necessarily able to use it
 - Use simple and clear illustration can avoid poor communication
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A person with short blonde hair is seen from the back, wearing a black and red gaming headset. They are looking at a computer monitor that 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.

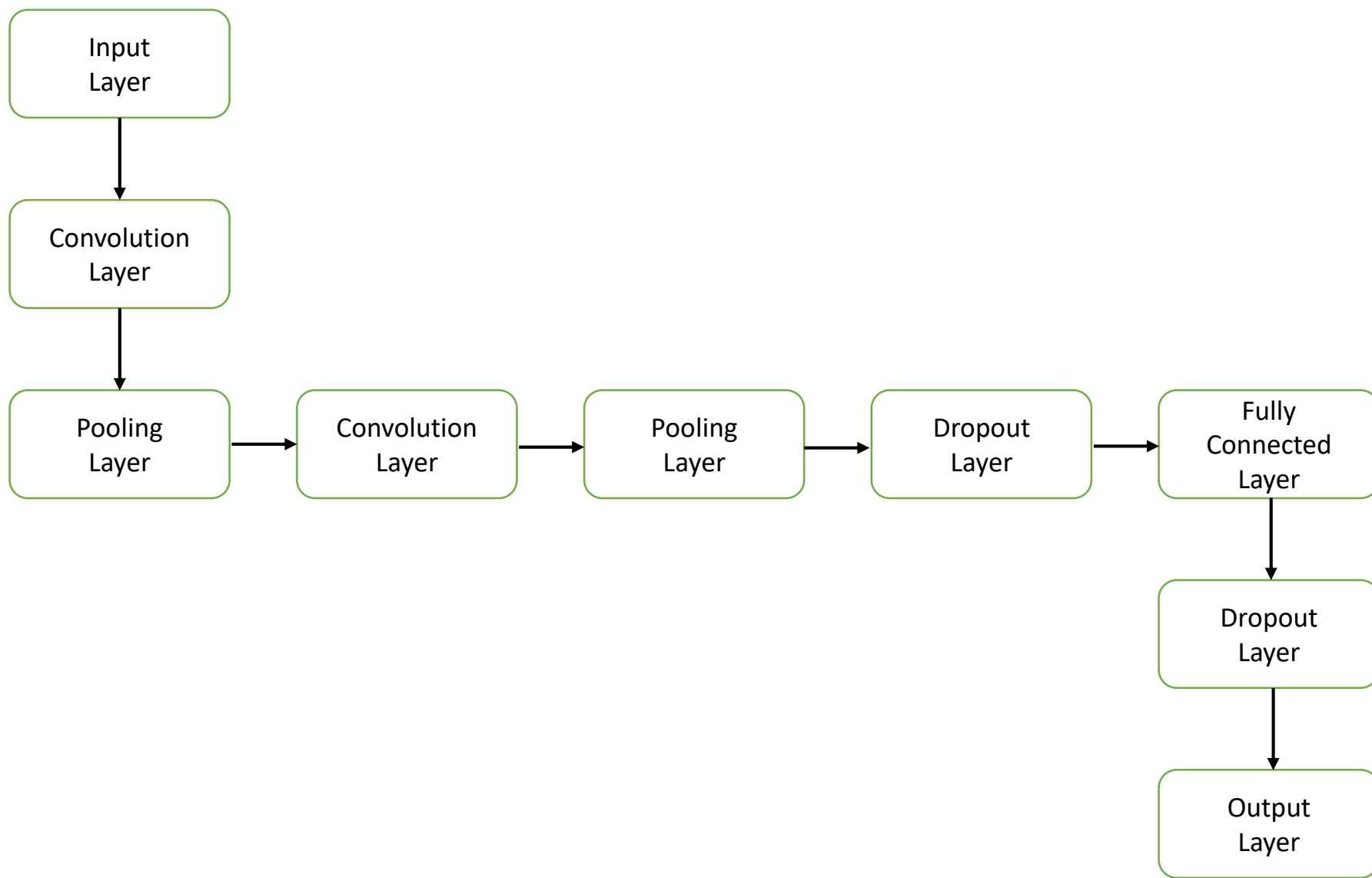
Second Method

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