



Comfort and Immersive Gaming

Follow My Lead 跟著我動

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動機 MOTIVATION

More Intuitive Way To Play

- Intuitively and directly control your avatar
- Customized settings



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Environment

1-1 Logitech gears 1-2 Soft wares

C920r



Advanced wireless keyboard with creative input dial.

- COMPLETE CREATIVE CONTROL
- TOUCH, TAP, AND TURN IN YOUR FAVORITE APPS
- TYPE WITH EFFORTLESS PRECISION

1

2

Go beyond built-in. Flexible and adjustable.

- FULL HIGH-DEF 1080P VIDEO CALLING
- FULL HD GLASS LENS
- BRIGHTER IMAGES
- FULL STEREOFONICS
- FLEXIBILITY THAT GOES BEYOND BUILT-IN

CRAFT



Python

Function implementation

OpenCV

Handle video stream



C#

Interface Design

Tensorflow

Deep learning model

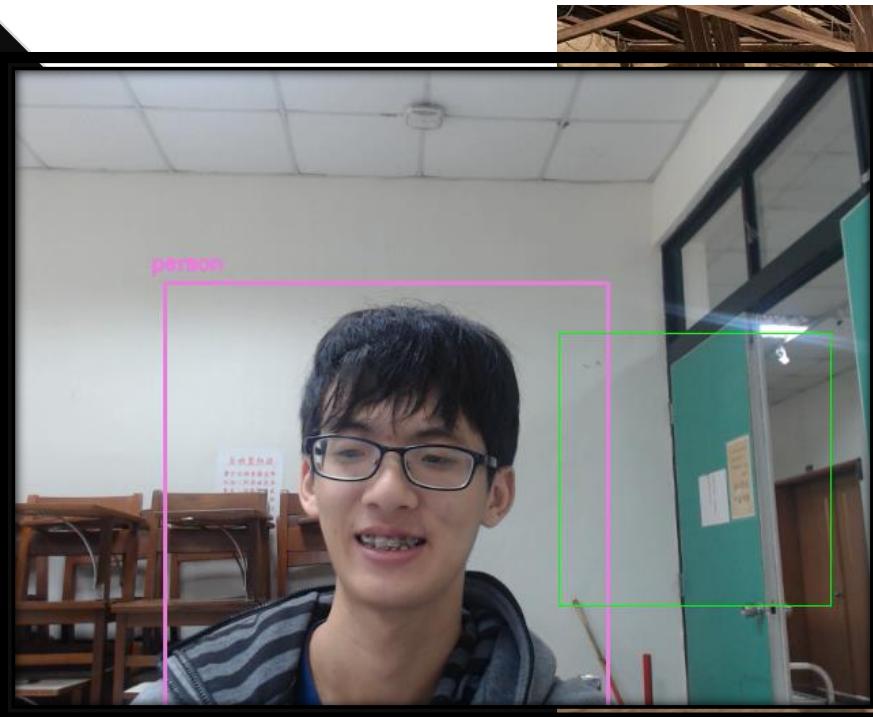


Function

2-1 FPS 2-2 CRAFT

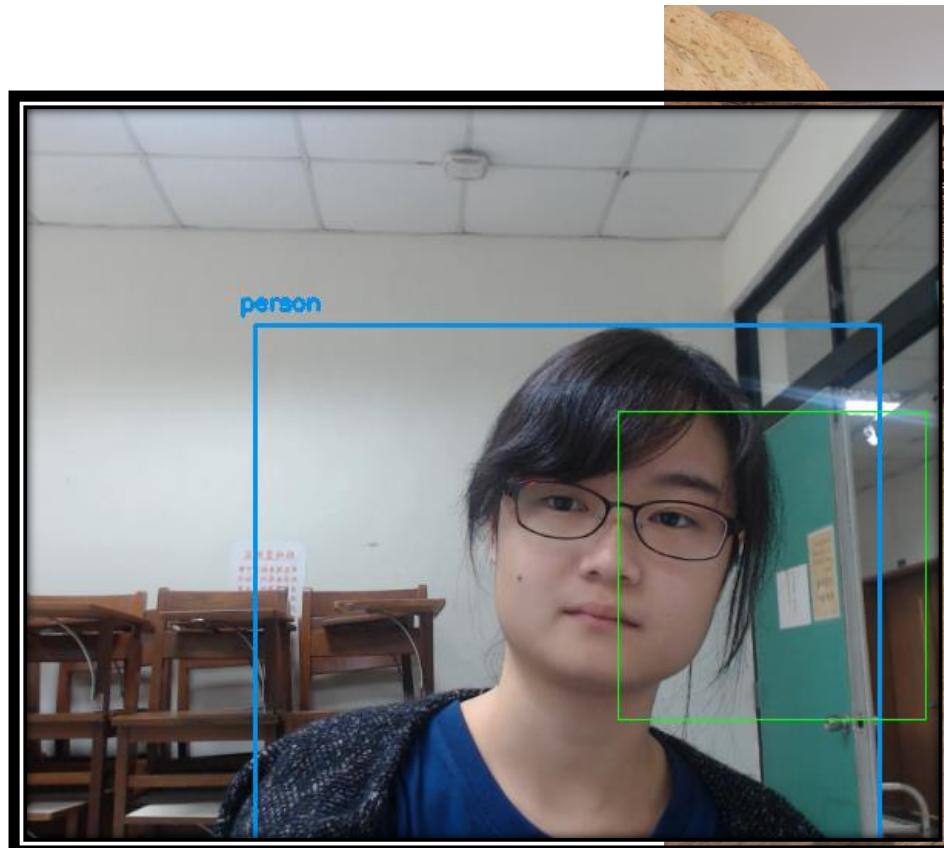
Emotion Recognition

Express yourself intuitively



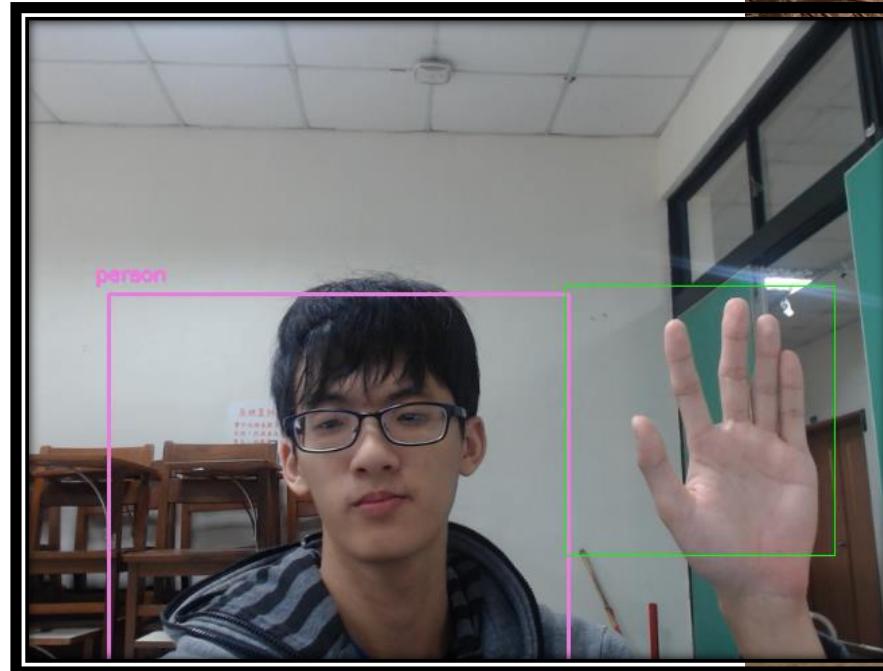
Body Movement Recognition

Express yourself intuitively



Gesture Recognition

Setting your own function





ADVANCED DESIGN

Creative Dial

Setting your own function





Users can input customized instructions



Whirl Right

Whirl Left

Press

UNLOCK

LOCK



Tilt-Lean Right

Angry

Tilt-Lean Left

Sad

Paper

surprise

Scissors

Happy

Stone

Technique

3-1 CNN 3-2 You Only Look Once



How CNN works

1	0	1
0	1	0
1	0	1

1	1	1	0	0
0	1	1	1	0
0	0	1	1	1
0	0	1	1	0
0	1	1	0	0

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STEP 01

Decide the kernel size

STEP 02

Compute element wise multiplication

STEP 03

Slide the filter over the image

STEP 04

Get the feature map

How YOLO works

STEP 01

Divides up the image into a grid of 13 by 13 cells

STEP 02

Each of these cells is responsible for predicting 5 bounding boxes.

STEP 03

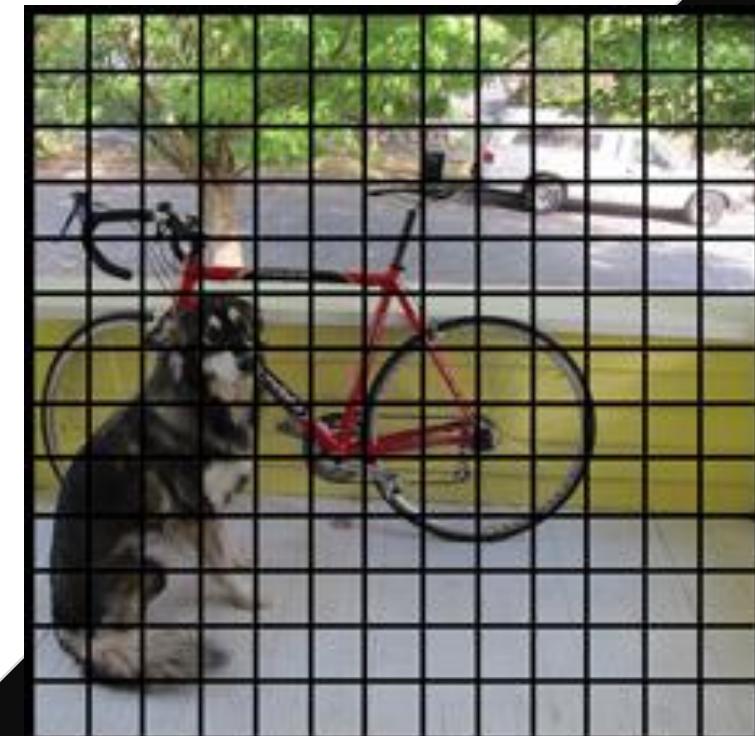
Outputs a confidence score that tells us how certain it is that the predicted bounding box actually encloses some object.

STEP 04

For each bounding box, predicts a class. (eg. PASCAL VOC dataset, which can detect 20 different classes)

STEP 05

Combine the confidence score for the bounding box and the class prediction into a final score



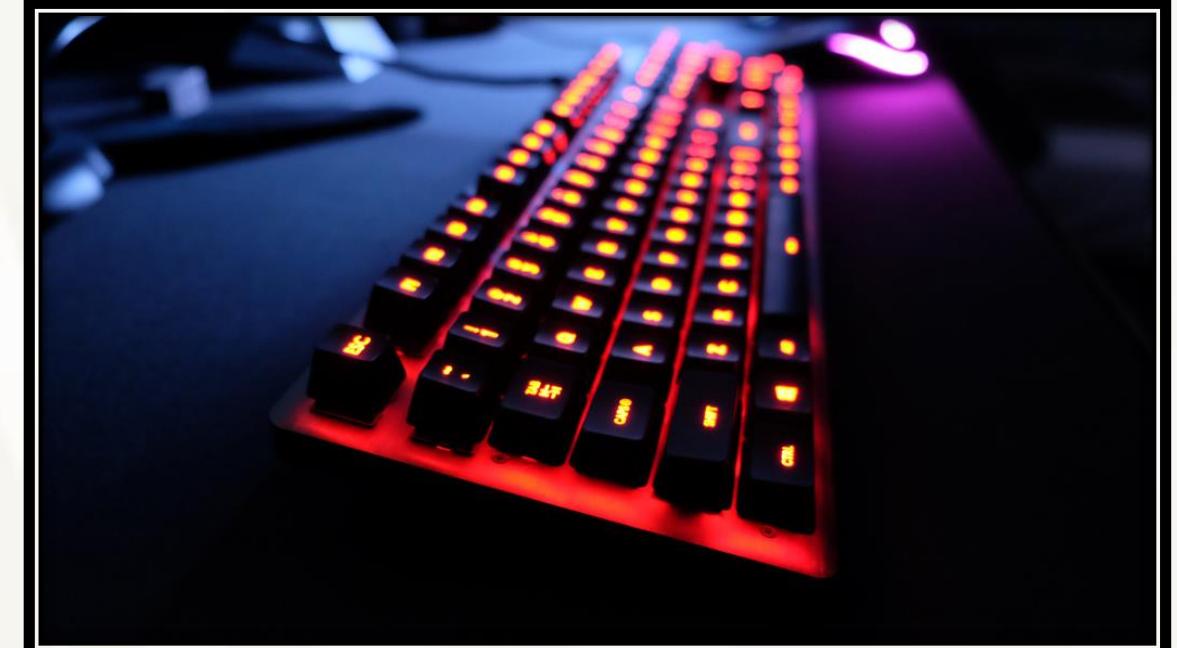


Demo



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Future Work



Thank you for listening

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