League of Legends Overlay Assistant

Project report

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Project Progress

- **Champion Ban/Pick Tool**

- **In Game Item Build Tool**

- **Mini-map detection tool**

Mini-map detection tool

Function

- About detecting mini-map to record the location of enemy disappear last time and can give a early warning for enemies' gank.(demo will be in the last)
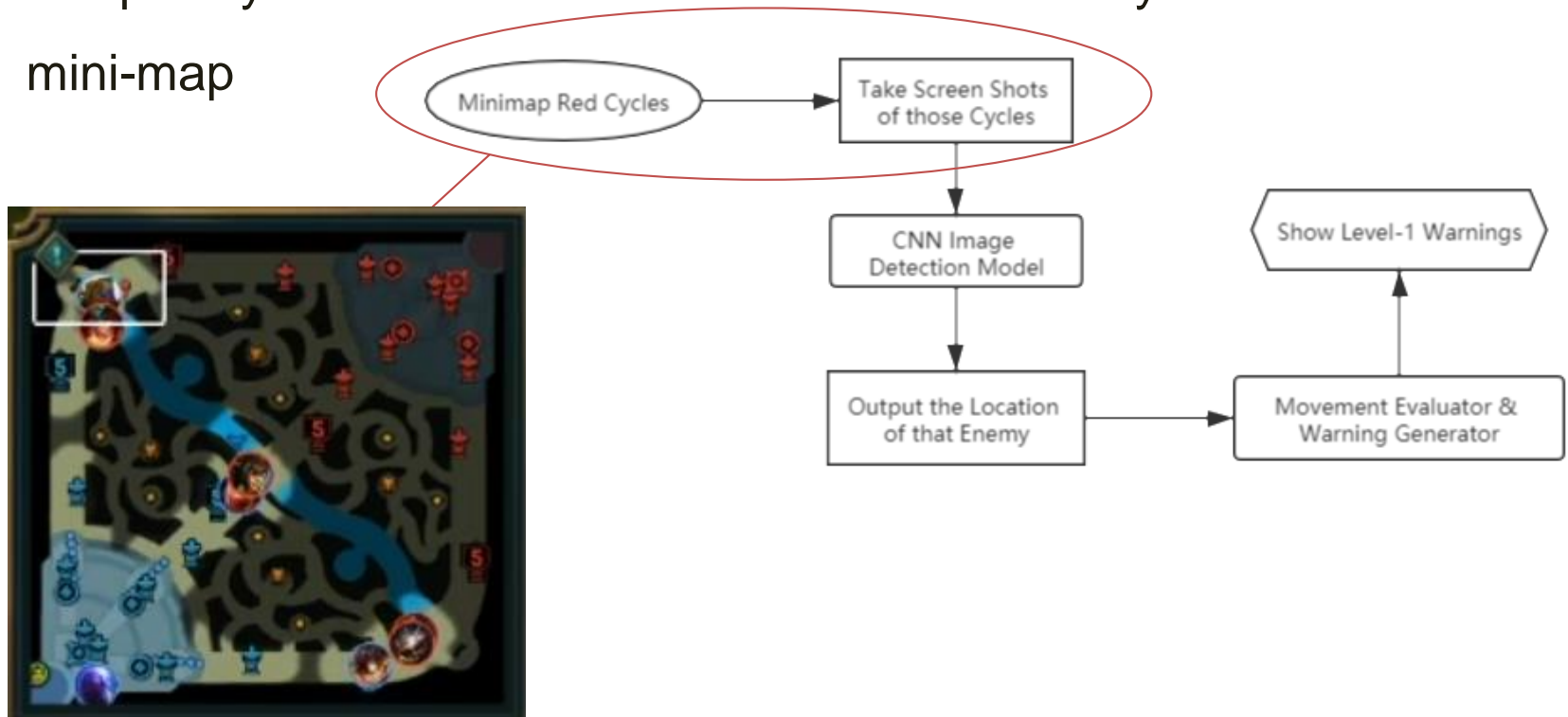
Example:

Mini-map detection tool

Step 1:

Frequently take screen shots and detect the red cycles in the
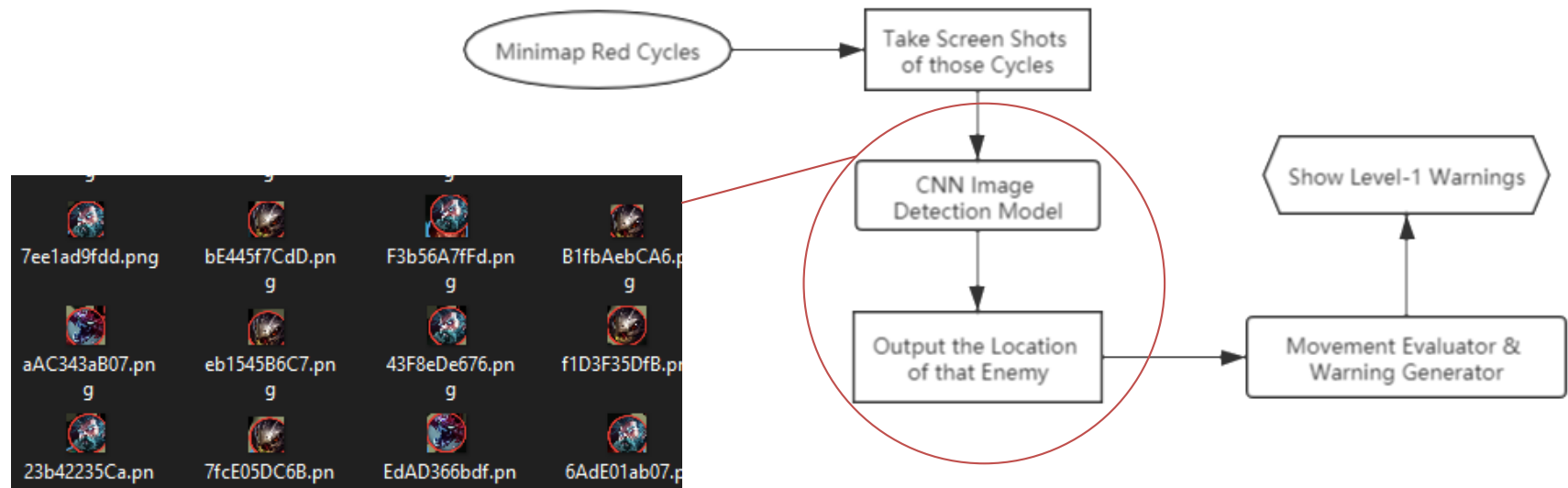
mini-map

Mini-map detection tool

Step 2:

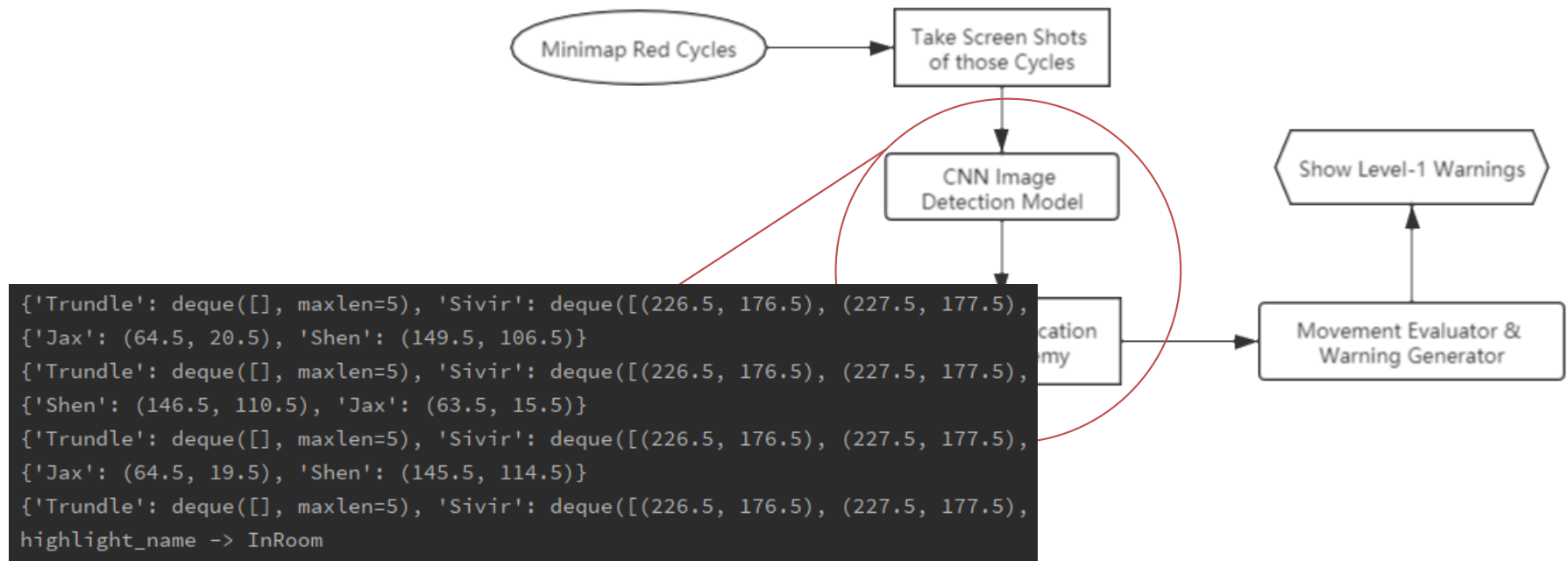Use CNN to detect champion portrait and output the location.

Mini-map detection tool

Step 2:

Use CNN to detect champion portrait and output the location.

Minimap Red Cycles → Take Screen Shots of those Cycles

CNN Image Detection Model

Show Level-1 Warnings

Movement Evaluator & Warning Generator

```
{'Trundle': deque([], maxlen=5), 'Sivir': deque([(226.5, 176.5), (227.5, 177.5),
{'Jax': (64.5, 20.5), 'Shen': (149.5, 106.5)}
{'Trundle': deque([], maxlen=5), 'Sivir': deque([(226.5, 176.5), (227.5, 177.5),
{'Shen': (146.5, 110.5), 'Jax': (63.5, 15.5)}
{'Trundle': deque([], maxlen=5), 'Sivir': deque([(226.5, 176.5), (227.5, 177.5),
{'Jax': (64.5, 19.5), 'Shen': (145.5, 114.5)}
{'Trundle': deque([], maxlen=5), 'Sivir': deque([(226.5, 176.5), (227.5, 177.5),
highlight_name -> InRoom
```

USC Viterbi
School of Engineering
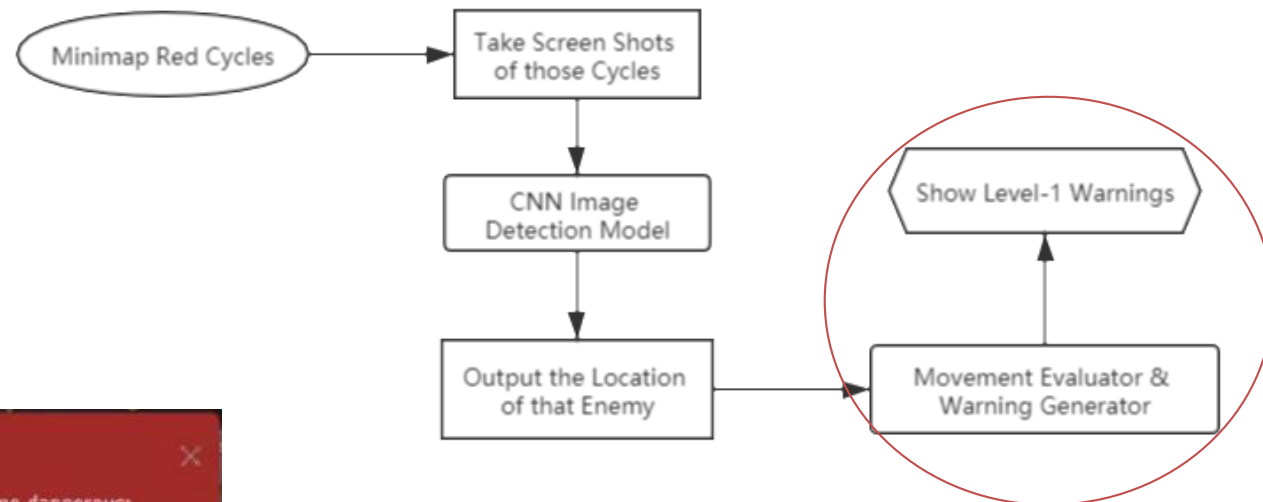
University of Southern California

Mini-map detection tool

Step 3:

Based on the location information, give warning for danger if enemy disappeared for a period and was going ahead to you.

Future Steps (Short-term)

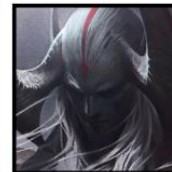## In-Game "My champion's skin" detection

- Get our user's champion identity when they use skins

- Data collection (Finished)

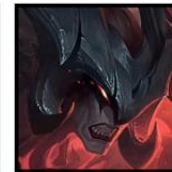- Model training (In-progress)

- Testing (Undone)
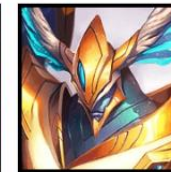

aatrox-classic.png

aatrox-blood-moon-pre... ion.png   aatrox-blood-moon.png   aatrox-classic.png   aatrox-justicar.png   aatrox-mecha.png

aatrox-sea-hunter.png   aatrox-victorious.png

Future Steps (For final report)

Video record and edit

- Test and debug our app

- Record a full video demo and edit the video

Final Presentation

- We plan to do our final presentation in a video to avoid possible network or electronic issue on that day

- Finish PPT and record every member's presentation

EDD

- Update our EDD, need to add contents about function 2 and 3 that we finished after mid-term.

Future Steps (Long-term, if have time)

Rune Pick Tool

- Data collection and backend logic (Finished)

- Problem unsolved: we cannot detect "my champion" identity before getting into the game because of the randomness of order and dull color in bp stage, but we have to recommend runes for specific champion before the game start

Update Data

- Keep updating data like champion, skin, win rate, game record…, because this game updates more than twice a month, data changes quickly.

Demo

Thank you !