

Teach AI play the Atari ice hockey game by videos

Yangyang Xu

A report submitted for the course
COMP8755 AND Individual Computing Project
Supervised by: Dr. Penny Kyburz
The Australian National University

March 2019

© Yangyang Xu 2019

DRAFT - 8 March 2019

Except where otherwise indicated, this report is my own original work.

Yangyang Xu
9 March 2019

Contents

1	playing hard exploration game by watching YouTube	1
1.1	Problem Statement	1
1.2	Motivations	1
1.3	Project Scope	1
1.4	Report Outline	1
2	Supervised Video Representation Learning with Odd-One-Out Networks	3
2.1	Problem Statement	3
2.2	Motivations	3
2.3	Project Scope	3
2.4	Report Outline	3
3	Player Experience Extraction from gameplay video	5
3.1	Problem Statement	5
3.2	Motivations	5
3.3	Project Scope	5
3.4	Report Outline	5
4	Atari Gym	7
4.1	Problem Statement	7
4.2	Motivations	7
4.3	Project Scope	7
4.4	Report Outline	7
	Bibliography	9

playing hard exploration game by watching YouTube

Put your introduction here. You could use `\fix{ABCDEFG.}` to leave your comments, see the box at the left side.

You have to
rewrite your
thesis!!!

1.1 Problem Statement

Describe the problem your project addresses.

1.2 Motivations

1.3 Project Scope

Describe the problem your project addresses.

1.4 Report Outline

How many chapters you have? You may have Chapter ??, Chapter ??, Chapter ??, Chapter ??, and Chapter ??.

Supervised Video Representation Learning with Odd-One-Out Networks

Put your introduction here. You could use `\fix{ABCDEFG.}` to leave your comments, see the box at the left side.

You have to
rewrite your
thesis!!!

2.1 Problem Statement

Describe the problem your project addresses.

2.2 Motivations

2.3 Project Scope

Describe the problem your project addresses.

2.4 Report Outline

How many chapters you have? You may have Chapter ??, Chapter ??, Chapter ??, Chapter ??, and Chapter ??.

Player Experience Extraction from gameplay video

Put your introduction here. You could use `\fix{ABCDEFG.}` to leave your comments, see the box at the left side.

You have to
rewrite your
thesis!!!

3.1 Problem Statement

Describe the problem your project addresses.

3.2 Motivations

3.3 Project Scope

Describe the problem your project addresses.

3.4 Report Outline

How many chapters you have? You may have Chapter ??, Chapter ??, Chapter ??, Chapter ??, and Chapter ??.

Atari Gym

Put your introduction here. You could use `\fix{ABCDEFG.}` to leave your comments, see the box at the left side.

You have to
rewrite your
thesis!!!

4.1 Problem Statement

Describe the problem your project addresses.

4.2 Motivations

4.3 Project Scope

Describe the problem your project addresses.

4.4 Report Outline

How many chapters you have? You may have Chapter ??, Chapter ??, Chapter ??, Chapter ??, and Chapter ??.

Bibliography
