

# COMP8620: MC-AIXI-CTW

## Group 3

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## 1 Introduction

### 1.1 Domains

The domains assigned to group 3 are as follows:

Pacman, Tic-Tac-Toe, Biased Rock-Paper-Scissor, Extended Tiger, Cheesemaze

### 1.2 Files

The report archive should contain the following:

MC-AIXI-CTW-Grp3.zip

\report

    This report

    Latex files

    Plot pngs

\src

    C++ source code

    Environment configuration files

## 1.3 User Manual

# 2 MC-AIXI-CTW Implementation

## 2.1 Environments

### 2.1.1 Cheesemaze

### 2.1.2 Extended Tiger

### 2.1.3 Biased Rock-Paper-Scissor

### 2.1.4 Tic-Tac-Toe

### 2.1.5 Pacman

## 2.2 Monte Carlo Tree Search (MCTS) Algorithm

## 2.3 Context Tree Weighting (CTW)

# 3 Simulation Results

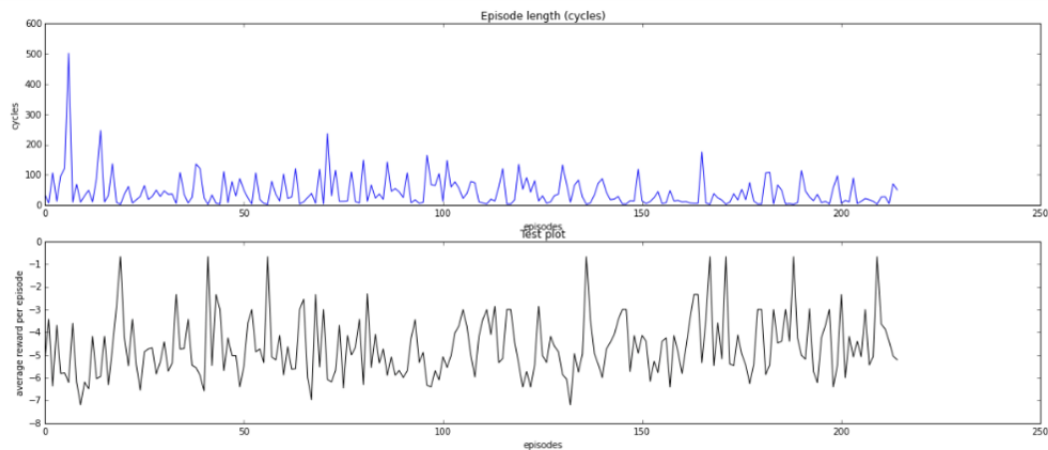
## 3.1 Cheesemaze

◇ Experimental setup ...

Any simulation provided should include detailed description of experimental setup; selected parameters of algorithms and examples; and concise interpretations of obtained simulation results.

Environment	MCTS	CTW
1	m = ?	ct-depth = ?

◇ Plots ...



◇ Interpretation of Results

## 3.2 Extended Tiger

Experimental setup ...

Plots ...

### **3.3 Biased Rock-Paper-Scissor**

Experimental setup ...

Plots ...

### **3.4 Tic-Tac-Toe**

Experimental setup ...

Plots ...

### **3.5 Pacman**

Experimental setup ...

Plots ...

## **4 Cross Domain Simulation Results**

Cheesemaze and Extended Tiger

## **5 Possible Other things**

Cross domain simulation on more difficult environments...

Separate CTW for Obs and Rews...