# **Final Year Project: Multiplayer Online Game with AI - Progress Report**

## **Progress Chart**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Agenda\Week** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** |
| Determine project direction |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Find out feasibility of Mahjong AI |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Explore Unity |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Study Machine Learning |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Research on TensorFlow & Pytorch |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Research and understand Machine Learning agents (ML-agents) in Unity |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Try out demo game using ML-agent in Unity |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify methods to train the AI (Tic Tac Toe) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Understanding the of various data types seen in examples |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Implementing the logic required by the AI |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Write and troubleshoot the script for the AI gameObject |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Training and troubleshooting the AI script with existing .yaml trainer file. |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Edit the Tic Tac Toe script for faster training and troubleshoot errors |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Create documentation for Unity ML agents |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Discuss and research on possible game idea for 2nd game |  |  |  |  |  |  |  |  |  |  |  |  |  |

## **Tasks Completed**

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| --- | --- | --- |
| **Date** | **Number of hours** | **Task Completed** |
| 18-OCT-20 | Ongoing | Edit the Tic Tac Toe script for faster training and troubleshoot errors  The game bugs out if the script runs without time delay (Wins mislabelled as draw) |
| 18-OCT-20 | 4 Hours | Create documentation for Unity ML agents  Created a general descriptive report of Unity ML Agents |
| 18-OCT-20 | 2.5 Hours | Discuss and research on possible game idea for 2nd game |

## **Problems Faced**

NA