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

## **Progress Chart**

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| **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 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## **Tasks Completed**

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| **Date** | **Number of hours** | **Task Completed** |
| 12-AUG-20 | 1 | Determine project direction:  Discuss and decide game direction |
| 12-AUG-20 | 1 | Determine project direction:  Plan project stages |
| 17-AUG-20 | 1.5 | Find out feasibility of Mahjong AI:  Understand Mahjong logic and available Mahjong AI on market |
| 17-AUG-20 | 1 | Find out feasibility of Mahjong AI:  Research and understand Suphx development (Microsoft’s Mahjong AI) |
| 19-AUG-20 | 0.5 | Explore Unity:  Download Unity |
| 19-AUG-20 | 1.5 | Study Machine Learning:  Understand core Machine Learning concepts |
| 19-AUG-20 | 1 | Study Machine Learning:  Research on Machine Learning framework: TensorFlow vs Pytorch |
| 24-AUG-20 | 1 | Explore Unity:  Research and understand Machine Learning agents (ML-agents) in Unity |
| 24-AUG-20 | 2 | Explore Unity:  Try out demo game using ML-agent in Unity |

## **Upcoming Tasks**

1. Kick off base game development
   * Basic game scene for Mahjong play
   * Game rules and sequence
2. Research and explore more implementations of Machine Learning for imperfect information games
3. Test Unity Machine Learning agent with other demo games
4. Test Unity Machine Learning agent with imperfect information games