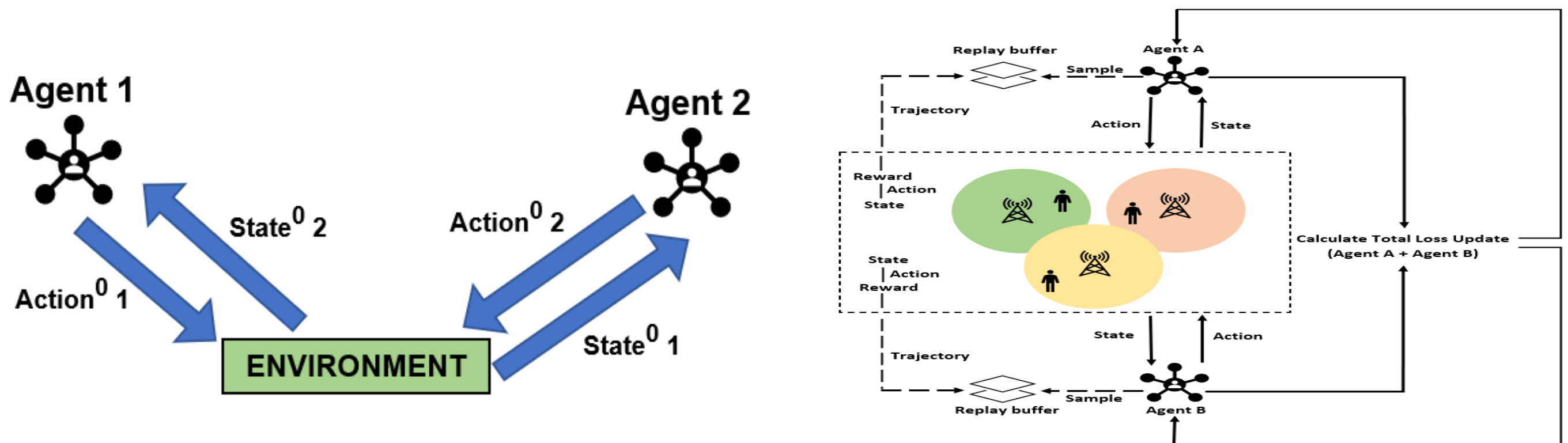


Developing AI Attacks/Defenses

Asynchronous Multi-Agent Reinforcement Learning

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Project Objectives:

For multi-agent reinforcement learning, every agent will execute their own action that influences the environment together at the same time step. However, all agents will not know what the other agents are going to act. Hence, the aim of this project is to propose an asynchronous multi-agent reinforcement learning framework using two agents in a simulated environment in which user devices (UDs) are moving around the neighbourhood and are requesting and uploading real-time information data to and from the base station. Four reinforcement learning algorithms will be considered and further experiments on the four algorithms were then carried out.

Result Analysis:

Result of the experiments was analysed to figure out which algorithm works best for asynchronous multi-agent reinforcement learning.

