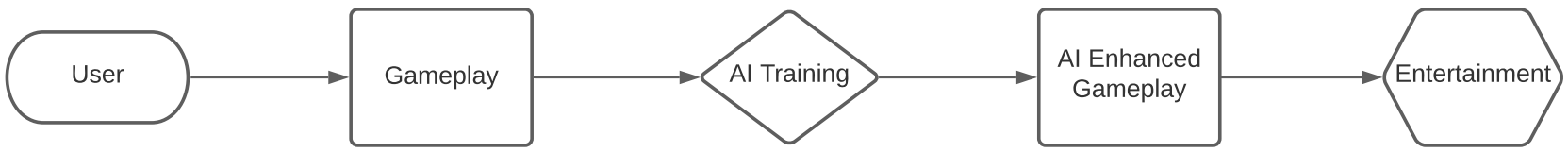
Design D0: Highest Level Design.

The user will start the game. The user will expierence gameplay with AI elements. This gameplay results in an entertaining expierence for the user.

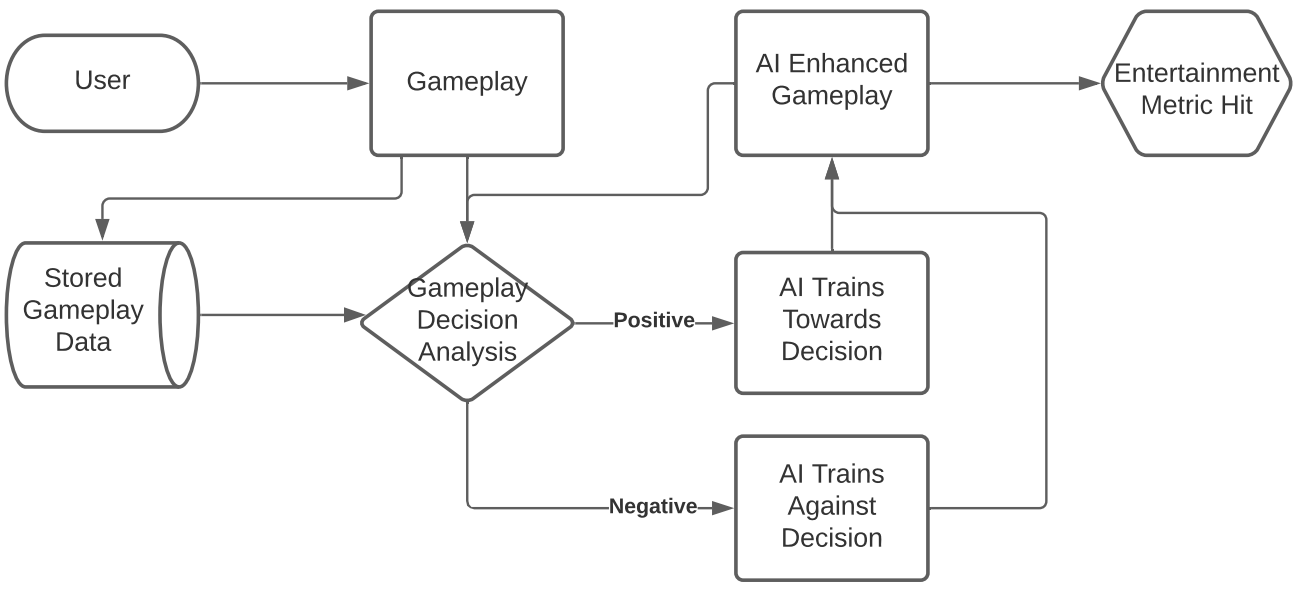
Design D1: Elaboration of D0.

The user will start the game. After the game has started the user will play the game. After the game has seen decisions made by the user, it will modify it's gameplay to better suit the individual user's expierence. This modularly infinite gameplay results in an entertaining expierence for the user.



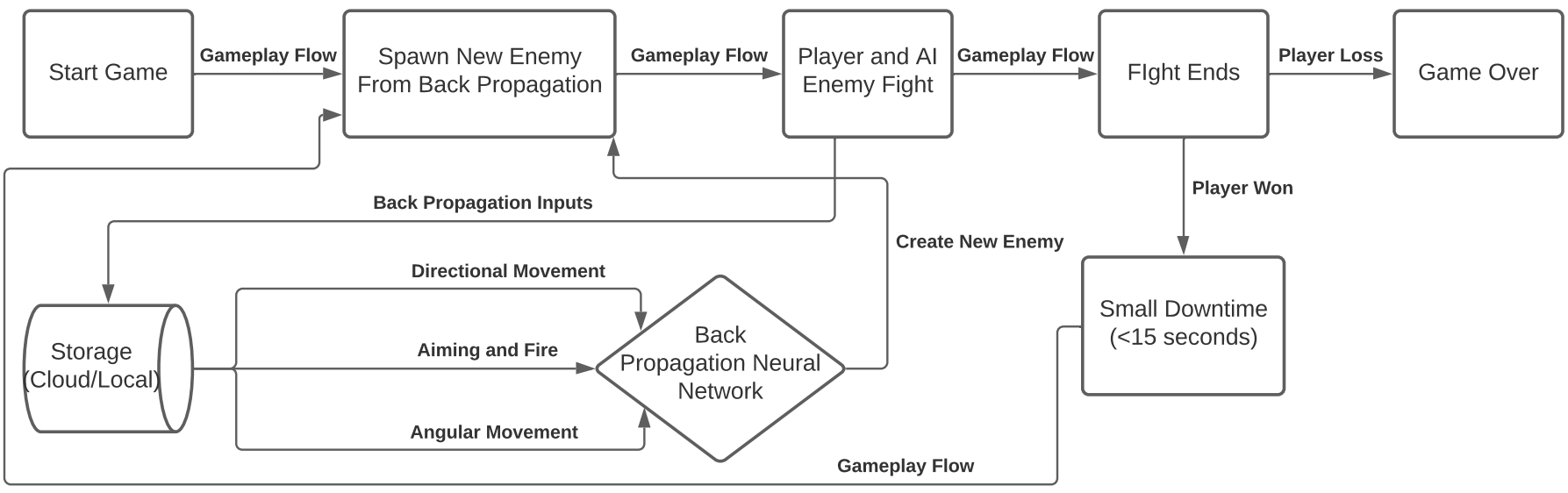
Design D2: Elaboration of D1.

The user will start the game. After the game has started the user will play the game. The game will be constantly keeping track of decisions made by the player and its outcomes. When the game goes to make a decision on what to do with the player, it will rely on the outcomes of it's past decisions as well the past decisions of the player. This cycle repeats over the course of the user playing the game, and will eventually modify it's gameplay to better suit the individual user's expierence.
This modularly infinite gameplay results in an entertaining expierence for the user.
We plan to hit a certain entertainment metric defined in the project description.

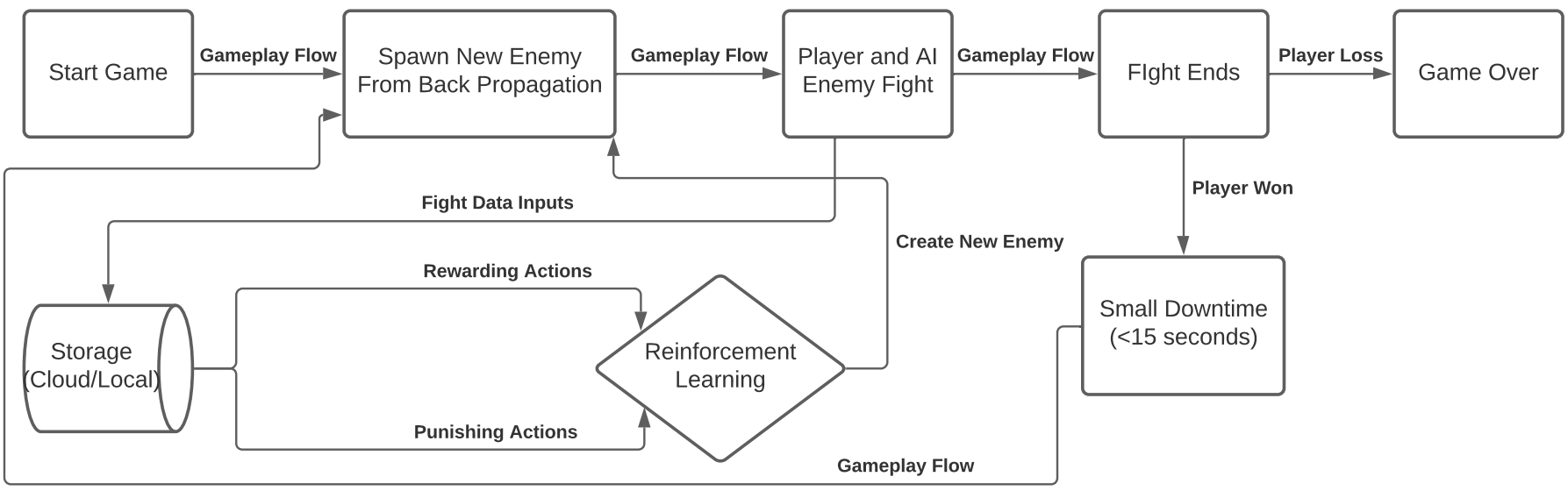


Design D3: Gameplay Loop and AI

After starting the game, a new randomized AI will be spawn with no data for training. Then the during the course of the game, data will be collected on the players inputs. This data will turn into the training and testing sets for our back propagation neural network. After defeating an enemy, the game will have a small downtime (time may be used eventually for item shop / inventory) to train the neural network. Then it will spawn a new enemy and repeat. The game ends when the player has been defeated by the AI.



Design D4: Gameplay Loop with Reinforcement Learning AI
Same gameplay loop as with back propogation, except we need to classify fight patterns into positive and negative depending on situation.



Legend