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With GAE and Clipping

A graph of a graph of a point

Description automatically generated with medium confidenceA screenshot of a graph

Description automatically generated

Without Clipping and with Generalized Advantage

A graph of loss and total loss

Description automatically generatedA blue and green square with white text

Description automatically generated

With Clipping and without Generalized Advantage

A screenshot of a graph

Description automatically generatedA chart of a graph

Description automatically generated with medium confidence

Without Clipping and without Generalized Advantage

A screenshot of a graph

Description automatically generatedA chart of a graph

Description automatically generated with medium confidence

The 2D landscape represents the value of being in each possible state (defined by the angle θ and angular velocity θ̇) of the inverted pendulum system. The key points are:

1. The landscape has a maximum value at the goal state, which corresponds to the inverted pendulum being balanced upright.
2. From this goal state, the landscape slopes downward in all directions. This means that states further away from the goal have lower values.
3. The steepness of the slopes represents the magnitude of the gradients - the stronger the gradient, the greater the force pushing the agent toward the goal state.
4. By following the steepest gradients on this landscape, the agent can determine the optimal actions to take at any given state. Moving in the direction of the highest gradient will reliably guide the agent toward the goal state.