The concept of this model is to acquire the right velocity at the right distance. After that, we can then calculate the required acceleration that is needed to achieve the velocity, and consequently, the net force.

The target velocity is calculated by using a proportion algorithm – target velocity = 0.2 x the remaining distances.

The model has two threshold points in order to achieve the target faster and more efficient. The first point is when the target is less than 0.5 units away. The model will try to maintain the velocity at 0.1 unit/sec. This velocity is easy to achieve despite the circumstance of friction limitation and also easy to stop. The second point is when the target is less than 0.1 units away. At this point, the net force will be cut to 0, then the friction will decelerate the object until rest. The error is in the maximum range of +- 0.05 units.