Progress Report #2
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As a group we have divided our work into two groups: (1) algorithms for forward following and
(2) building obstacles and using an obstacle avoidance algorithm. We have set-up the ROS and
Gazebo requirements for our project using the follow_ahead_rl repository. The gym environment
has also been adapted for a simpler test case for our reinforcement learning (RL) models. We
have been working on both D4PG and TD-DDPG algorithms which are model-free and
continuous. Our group has also decided to proceed with the World Model algorithm for our main
model-based code, but also has Trust Region Policy Optimization as a backup. We will also be
attempting some method of trajectory generation and reachability analysis, as suggested by
Payam, for a model-based algorithm.

Our first future task is to train the D4PG algorithm. Secondly, we want to finish the World Model
algorithm and the trajectory generation and reachability analysis by Friday April 2nd.
Concurrently we plan on implementing obstacle avoidance algorithms, this might include
path-finding or reachability analysis algorithms. We also have to figure out how to combine each
RL algorithm with the obstacles so that we can not only follow ahead of a human, but also avoid
obstacles at the same time.