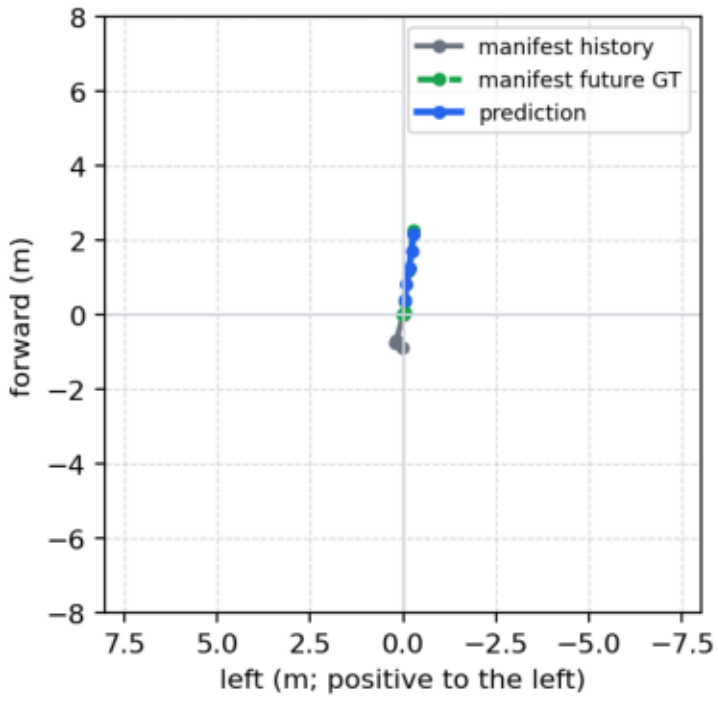
t=-5s | t=-1s | 744 | t=+1s | t=+5s









Student Prediction

ANALYSIS
Prediction: The white sedan crossing from left to right will continue its trajectory and clear the immediate path of the robot. The scooter on the left appears to be waiting or moving slowly. The traffic light ahead remains red, indicating that cross-traffic or pedestrians may have the right of way, or the robot is approaching a stop line.

Navigation Goal: The goal position [2.269, -0.28] is located forward and slightly to the right of the current position. This suggests the robot needs to proceed through the intersection or along the crosswalk while maintaining a safe distance from the crossing vehicle and the curb on the right.

Feasible Area: The immediate feasible area is the lane directly ahead, bounded by the crosswalk markings. The space to the right is constrained by the curb and the building. The space to the left is occupied by the scooter and potential cross-traffic.

Rules: The traffic light ahead is red. The robot is approaching a crosswalk. Standard rules require yielding to pedestrians and stopping at the stop line if the light is red. However, the robot's goal implies a forward movement, suggesting it might be in a phase where it can proceed cautiously or the light is about to change, or the robot is navigating a specific zone where stopping is not the primary action yet.

Collision Risks: The primary collision risk is the white sedan crossing the path. The robot must ensure the sedan has cleared the path before proceeding. The scooter on the left is a secondary risk if it moves unexpectedly into the robot's path. Pedestrians on the crosswalk are also a potential risk if they step into the robot's path.

RATIONALE
The robot should execute a 'slow_forward' maneuver. This involves moving forward at a low speed to safely navigate through the intersection/crosswalk area. The slow speed allows the robot to react to the white sedan clearing the path and to monitor the scooter and pedestrians. The slight rightward drift in the trajectory aligns with the goal position and keeps the robot centered in its lane while avoiding the curb on the right. This cautious approach ensures safety in a complex urban environment with multiple dynamic agents.

Teacher Reflection

ANALYSIS REFLECTION
Prediction: No clear issue.
Navigation Goal: No clear issue.
Feasible Area: No clear issue.
Rules: The analysis correctly identifies the traffic light as red in the current image. However, the reasoning that the robot should proceed because the goal implies forward movement is flawed. A red light is a hard constraint requiring the robot to stop at the stop line, regardless of the goal position. The robot should not proceed through the intersection while the light is red.
Collision Risks: No clear issue.

PLANNING REFLECTION
Rationale: The rationale suggests a 'slow_forward' maneuver to navigate through the intersection. This is unsafe and illegal given the red traffic light visible in the current image. The robot must wait for the light to turn green before proceeding. The ground truth trajectory shows the robot remaining stationary (x = 0) for the first two seconds, confirming that the correct action is to wait, not to move forward slowly.

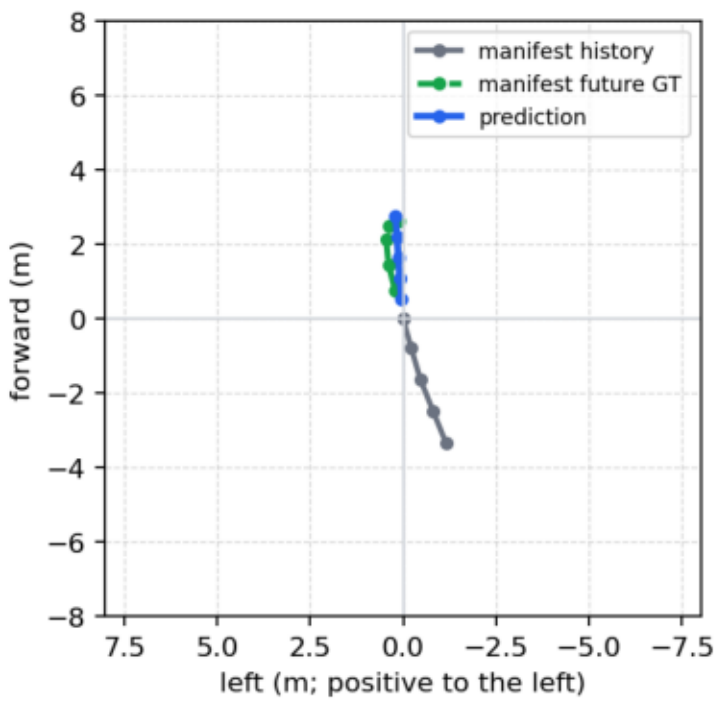
CORRECTION
Analysis: The traffic light is red, requiring the robot to stop and wait at the stop line. The white sedan and scooter are crossing traffic, further indicating that the robot does not have the right of way. The goal position is forward, but it cannot be reached until the light changes.
Planning: The robot should execute a 'stop' or 'wait' maneuver. It must remain stationary at the stop line until the traffic light turns green. Once the light is green and the intersection is clear, the robot can proceed forward towards the goal.
Trajectory: The trajectory should remain near the origin [0, 0] for the initial seconds (t=1s, t=2s) while waiting for the light to change. It should only begin to move forward (increasing x) after the light turns green, as seen in the ground truth trajectory where movement starts around t=3s.

t=-5s | t=-1s | 144 | t=+1s | t=+5s









Student Prediction

ANALYSIS
Prediction: The pedestrians in the foreground (woman with dog, woman with backpack) will continue walking forward along the sidewalk. The black SUV will continue driving forward in the lane. The pedestrian on the right will continue crossing the street. The traffic light remains red for the cross street, implying the robot's direction likely has a green or is safe to proceed slowly.

Navigation Goal: The goal position [2.621, 0.103] indicates a forward movement of approximately 2.6 meters with a slight leftward adjustment. This aligns with following the sidewalk path while maintaining a safe distance from the curb and the pedestrians ahead.

Feasible Area: The feasible area is the sidewalk directly ahead, bounded by the building on the left and the street curb on the right. The path is clear enough for the robot to proceed, provided it maintains a safe distance from the pedestrians walking ahead.

Rules: The traffic light shows a red hand signal for pedestrians, suggesting the robot should not enter the crosswalk. The robot should stay on the sidewalk and follow the flow of pedestrian traffic.

Collision Risks: Potential collision risks include the pedestrians walking ahead (woman with dog, woman with backpack) if the robot moves too fast or deviates from the path. The black SUV is a risk if the robot were to step onto the street, but staying on the sidewalk mitigates this.

RATIONALE
The robot should execute a 'slow_forward' motion to safely navigate along the sidewalk. This involves moving forward at a low speed to match the pace of the pedestrians ahead and maintain a safe following distance. The slight leftward adjustment in the goal position suggests staying centered on the sidewalk or avoiding the curb. This approach ensures safety around the pedestrians and complies with the 'slow_forward' meta-action.

Teacher Reflection

ANALYSIS REFLECTION
Prediction: No clear issue.
Navigation Goal: No clear issue.
Feasible Area: No clear issue.
Rules: The traffic light visible in the current image displays a red arrow pointing left and a green circular light. The red hand signal is a pedestrian countdown timer, not a prohibition for the robot to proceed. The robot should interpret the green light as permission to proceed, rather than assuming it must stop or that the signal implies a red light for its direction.
Collision Risks: No clear issue.

PLANNING REFLECTION
Rationale: No clear issue.

CORRECTION
Analysis: The traffic light shows a green circular light, indicating the robot can proceed. The red hand signal is for pedestrians. The robot should move forward along the sidewalk, keeping a safe distance from the pedestrians ahead.
Planning: Execute a 'slow_forward' motion to navigate along the sidewalk. Maintain a safe following distance from the pedestrians ahead and stay centered on the sidewalk path.
Trajectory: No clear issue.