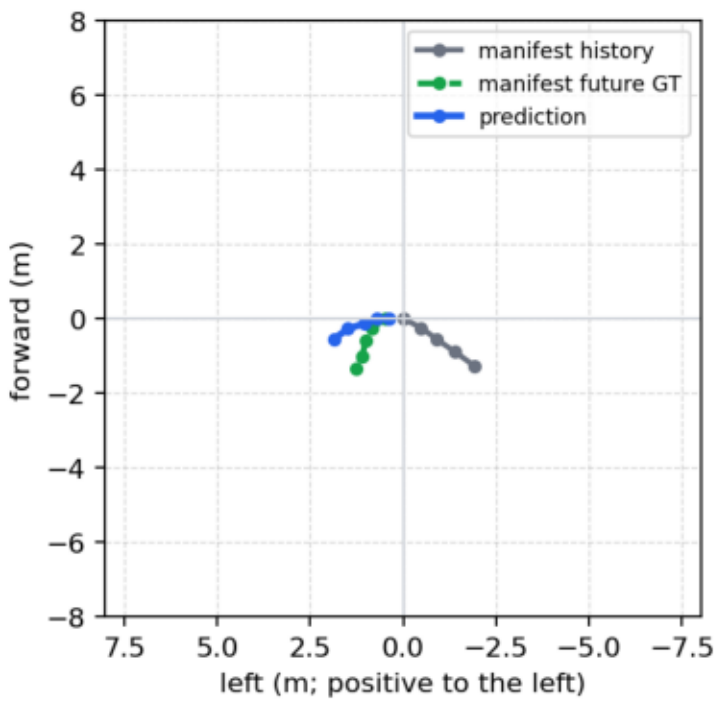
t=-5s | t=-1s | 564 | t=+1s | t=+5s





Student Prediction

ANALYSIS
Prediction: The red car in the distance is moving away and poses no immediate conflict. The traffic light remains red, requiring the robot to remain stationary or yield. No pedestrians are currently entering the crosswalk.

Navigation Goal: The goal position [-1.334, 1.267] is located to the left and slightly behind the robot's current position. This requires the robot to reverse its forward progress and move laterally to the left, likely to reposition or wait for a safe opportunity to proceed.

Feasible Area: The immediate area in front of the robot is a crosswalk and a bike lane. The space to the left is open but occupied by the curb and the red car further down. The space to the right is blocked by the sidewalk and pillars.

Rules: The traffic light is red, prohibiting forward movement. The 'No Turn on Red' sign reinforces that turning is not permitted while the light is red. The robot must obey the red signal.

Collision Risks: There are no immediate collision risks from dynamic agents. The primary constraint is the static traffic signal and the need to navigate around the crosswalk markings without entering the bike lane improperly.

RATIONALE
The robot should execute a 'left_back' maneuver. This involves reversing slightly to clear the immediate foreground and then steering left to align with the goal position. This motion pattern allows the robot to reposition itself safely while respecting the red traffic light and avoiding the bike lane markings. The trajectory will curve leftward as it moves backward, eventually stopping near the goal coordinates.

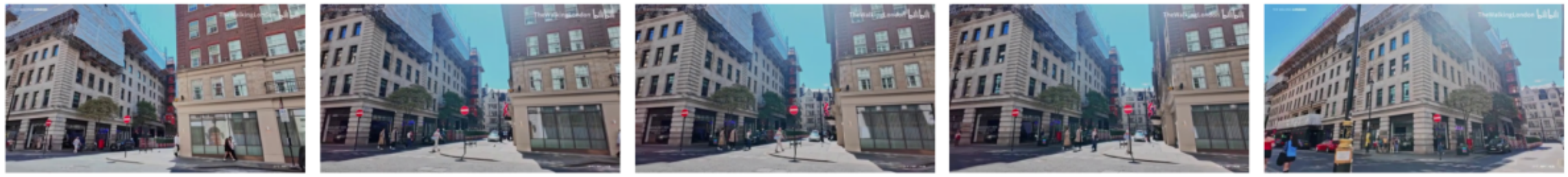
Teacher Reflection

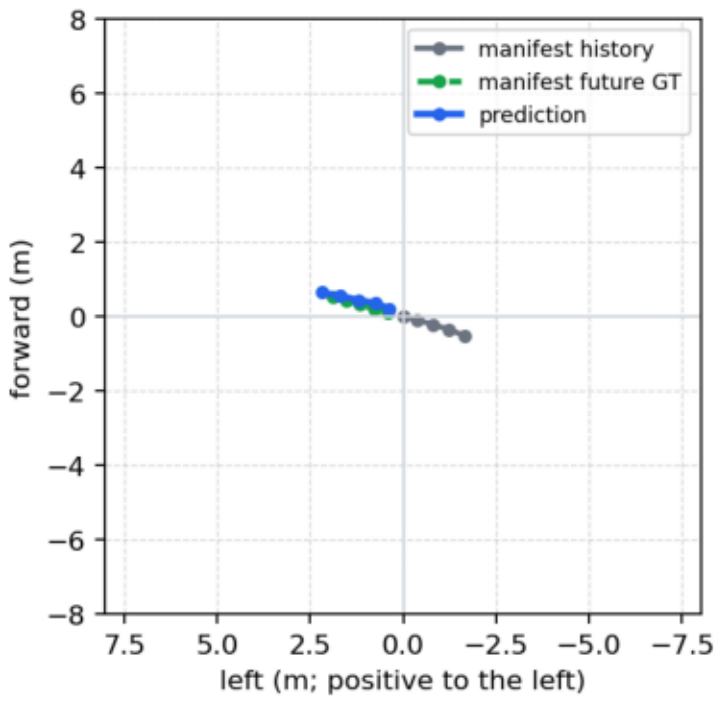
ANALYSIS REFLECTION
Prediction: The prediction states the traffic light remains red, but the current image shows the traffic light is green. This is a critical observation error.
Navigation Goal: No clear issue.
Feasible Area: No clear issue.
Rules: The analysis claims the robot must obey a red signal and that turning is prohibited. Since the light is green, the robot is permitted to proceed, and the 'No Turn on Red' sign is not currently restrictive.
Collision Risks: No clear issue.

PLANNING REFLECTION
Rationale: The rationale suggests reversing ('left_back') to wait for a safe opportunity due to a red light. Since the light is green and the path is clear, the robot should proceed forward and left towards the goal rather than reversing.

CORRECTION
Analysis: The traffic light is green, allowing the robot to proceed. The goal is to the left and slightly behind the current forward vector, requiring a leftward turn while moving forward.
Planning: The robot should execute a forward-left maneuver to cross the intersection and reach the goal position, rather than reversing.
Trajectory: The trajectory should move forward (positive x) and left (positive y) to reach the goal, instead of moving backward (negative x).

t=-5s | t=-1s | 264 | t=+1s | t=+5s





Student Prediction

ANALYSIS
Prediction: The pedestrian in the center is actively crossing the street and will continue moving towards the right side of the frame. The pedestrian on the right is walking away from the camera. The pedestrian on the left is walking parallel to the road. The white car in the distance appears stationary or slow-moving.

Navigation Goal: The goal position [0.52, 1.886] indicates a movement forward and to the left. This aligns with navigating around the corner or turning left onto the adjacent street, avoiding the main road where the pedestrian is crossing.

Feasible Area: The immediate path forward is partially blocked by the crossing pedestrian. The space to the left, near the corner, appears to be a feasible area for a turn or a stop, provided the pedestrian clears the path. The sidewalk area to the right is also feasible but the goal suggests a leftward trajectory.

Rules: There is a 'No Entry' sign visible on the left, indicating that the street to the left is one-way or restricted for the current direction of travel, or simply marking the boundary. The pedestrian crossing implies a need for caution and yielding.

Collision Risks: The primary collision risk is the pedestrian crossing from left to right in the center of the view. The robot must ensure this pedestrian has cleared the path before proceeding. The pedestrian on the right is less of a risk as they are moving away.

RATIONALE
The robot should execute a 'left_translate' motion. This involves moving forward while gradually shifting to the left. This trajectory allows the robot to navigate around the corner or towards the left side of the intersection while maintaining a safe distance from the crossing pedestrian. The motion is smooth and cautious, respecting the pedestrian's right of way and the urban environment.

Teacher Reflection

ANALYSIS REFLECTION
Prediction: No clear issue.
Navigation Goal: No clear issue.
Feasible Area: No clear issue.
Rules: The 'No Entry' sign is located on the street to the left (negative y). The goal is to the right (positive y). The sign does not restrict the intended path and is irrelevant to the current navigation decision.
Collision Risks: No clear issue.

PLANNING REFLECTION
Rationale: The rationale suggests a 'left_translate' motion to navigate around a corner or turn left. This contradicts the goal position [0.524, 1.897], which has a positive y-coordinate (right) and positive x-coordinate (forward). The robot should move forward and to the right, not left.

CORRECTION
Analysis: The goal [0.524, 1.897] indicates a forward and rightward trajectory. The path ahead is clear of immediate obstacles, though pedestrians are present on the sidewalks.
Planning: The robot should execute a 'forward_translate' with a slight rightward bias to align with the goal. The motion should be smooth and cautious, maintaining a safe distance from the pedestrians on the right sidewalk.
Trajectory: The trajectory should move forward and to the right, following the ground-truth path [[0.111, 0.412], [0.21, 0.773], [0.319, 1.16], [0.42, 1.524], [0.524, 1.897]].