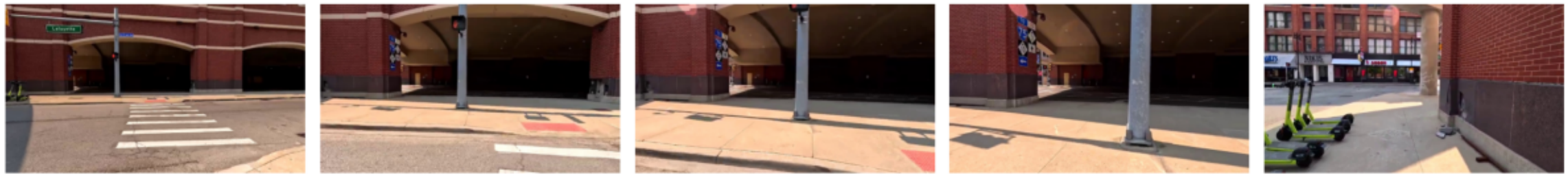
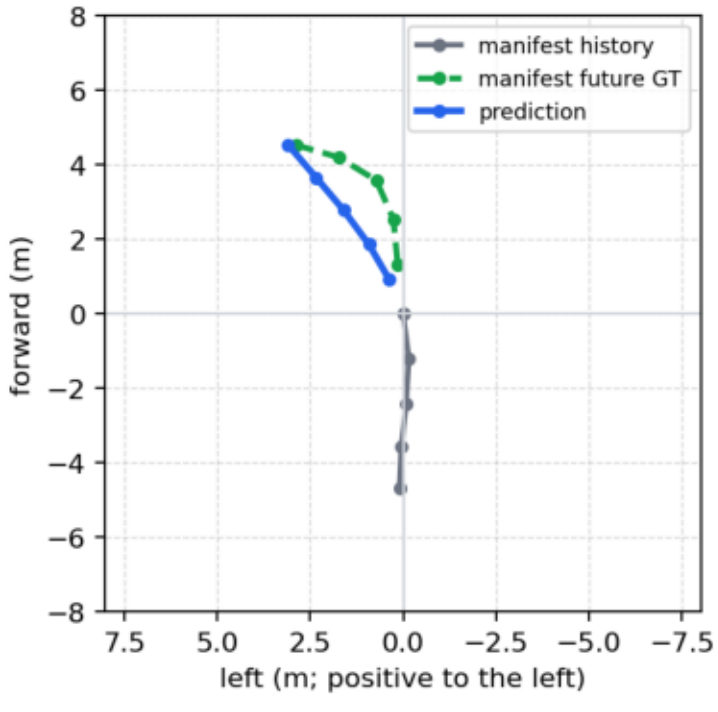
t=-5s | t=-1s | 429 | t=+1s | t=+5s





Student Prediction

ANALYSIS
Prediction: The traffic light remains red, requiring the robot to stay on the sidewalk. The pedestrian in the distance is moving away or parallel to the robot's path and poses no immediate conflict. The environment is static with no moving vehicles.

Navigation Goal: The goal position [4.525, 2.879] is located further down the sidewalk, requiring the robot to move forward and slightly to the left to align with the path alongside the building. The meta-action 'left_turn' likely refers to the trajectory curvature needed to follow the sidewalk's path or avoid the pole.

Feasible Area: The feasible area is the concrete sidewalk extending forward. The path is bounded by the building on the left and the street/curb on the right. The space is clear of obstacles.

Rules: The traffic light is red, prohibiting entry into the street. The robot must remain on the sidewalk. There are no specific pedestrian signals visible, but standard sidewalk navigation rules apply.

Collision Risks: The primary risk is the traffic light pole in the foreground, which must be passed. The robot must ensure it does not drift too far right towards the street or too far left into the building wall.

RATIONALE
The robot should execute a forward motion with a slight leftward curve to follow the sidewalk path. This trajectory allows the robot to pass the traffic light pole safely on its right while maintaining a safe distance from the building on the left. The motion aligns with the goal position and avoids the street, adhering to the red light signal.

Teacher Reflection

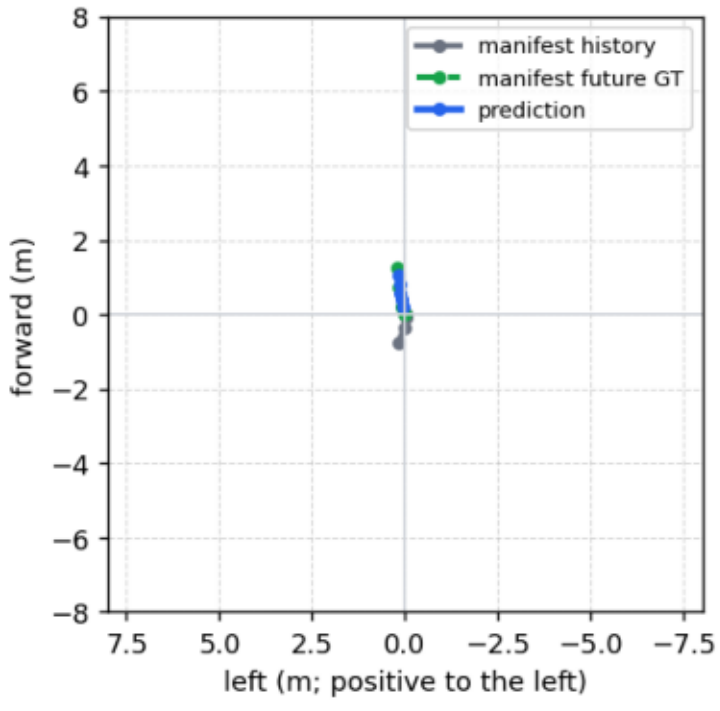
ANALYSIS REFLECTION
Prediction: The claim that the traffic light remains red is incorrect; the current image shows the pedestrian signal is green (white walking figure), indicating it is safe to proceed. Additionally, the claim that the environment is static is incorrect as there are parked scooters visible on the left.
Navigation Goal: No clear issue.
Feasible Area: The description of the feasible area is incomplete as it fails to account for the parked scooters on the left side of the sidewalk, which constrain the available path width.
Rules: The rule analysis is incorrect because it cites a red light as a prohibition, whereas the current signal is green.
Collision Risks: The analysis misses the collision risk posed by the parked scooters on the left side of the path.

PLANNING REFLECTION
Rationale: The rationale is flawed because it is based on the incorrect premise that the light is red and the path is clear. The plan should prioritize navigating between the scooters on the left and the curb on the right.

CORRECTION
Analysis: The pedestrian signal is green, allowing the robot to proceed. The path is constrained by parked scooters on the left and the curb on the right.
Planning: The robot should move forward while maintaining a safe distance from the scooters on the left and the curb on the right, following the sidewalk path.
Trajectory: The trajectory should be adjusted to stay further right to avoid the scooters, rather than curving left towards them.

t=-5s | t=-1s | 528 | t=+1s | t=+5s





Student Prediction

ANALYSIS
Prediction: The pedestrian on the right is walking towards the center of the road and will likely cross the robot's path or move into the immediate vicinity. The white car in the background is moving away, clearing the intersection. The traffic light remains red.

Navigation Goal: The goal position [1.25, 0.204] is slightly forward and to the left. However, the immediate path is blocked by the pedestrian crossing from the right. The robot needs to navigate around the pedestrian while adhering to the red light.

Feasible Area: The immediate path forward is obstructed by the pedestrian. The space to the left is constrained by the sidewalk and parked scooter. The space to the right is occupied by the pedestrian's trajectory.

Rules: The traffic light is red, requiring the robot to stop or yield. The pedestrian is crossing the street, which has priority.

Collision Risks: The primary collision risk is the pedestrian crossing from the right. The robot must yield to avoid a collision. The parked scooter on the left is a static obstacle to avoid.

RATIONALE
The robot should execute a 'stop' action. The pedestrian is actively crossing the robot's path from the right, and the traffic light is red. Stopping ensures safety for the pedestrian and compliance with traffic rules. The robot will remain stationary or move very slowly to allow the pedestrian to clear the path before proceeding towards the goal.

Teacher Reflection

ANALYSIS REFLECTION
Prediction: The student incorrectly identifies the pedestrian as being on the right. Based on the coordinate rule (y > 0 is left), the pedestrian is located on the left side of the robot's path. Additionally, the student claims the traffic light is red, but the visible traffic light for the crosswalk is green.
Navigation Goal: No clear issue.
Feasible Area: The student incorrectly states the space to the left is constrained by the sidewalk and scooter. The sidewalk and scooter are actually on the right side (y < 0). The left side (y > 0) is the open crosswalk area where the pedestrian is walking.
Rules: The student incorrectly states the traffic light is red. The traffic light visible in the current image is green, permitting the robot to proceed.
Collision Risks: The student identifies the pedestrian as a risk but places them on the wrong side (right instead of left). The pedestrian is on the left (y > 0) and moving towards the center.

PLANNING REFLECTION
Rationale: The rationale to stop is based on the incorrect premise that the light is red and the pedestrian is on the right. Since the light is green and the pedestrian is on the left, the robot should proceed forward while monitoring the pedestrian on the left.

CORRECTION
Analysis: The robot is at an intersection with a green traffic light. A pedestrian is walking on the crosswalk from the left side (y > 0) towards the center. The goal is forward and slightly left. The path forward is clear, but the robot must account for the pedestrian on the left.
Planning: The robot should proceed forward towards the goal. It should maintain a safe distance from the pedestrian on the left. The 'stop' action is unnecessary as the light is green and the pedestrian is not directly blocking the immediate forward path.
Trajectory: The trajectory should move forward (positive x) and slightly left (positive y) to reach the goal, avoiding the pedestrian on the left.