

# SUPPLEMENTARY MATERIAL: ALPHA DRIVE: UNLEASHING THE POWER OF VLMS IN AUTONOMOUS DRIVING VIA RL AND REASONING

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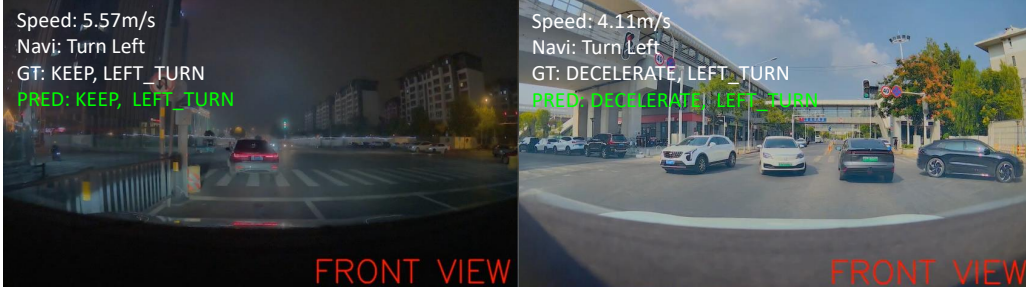


Figure 1: More visualizations of AlphaDrive in out-of-sample scenarios.



Figure 2: Visualizations of some failure cases of AlphaDrive.

We present more ablation studies in the appendix of the main paper. Here, we provide additional qualitative visualizations, and the submitted zip file also includes a visualization video of AlphaDrive.

## 1 MORE VISUALIZATIONS

We present more planning visualizations of AlphaDrive in unseen scenarios in Fig. 1. In the top-right corner of each sub-image, we show the vehicle’s current speed, navigation information, the ground-truth action, and the model’s predicted action. The left sub-image in Fig. 1 shows the ego vehicle following a car at a constant speed while making a left turn at night. The right sub-image depicts the ego vehicle slowing down to avoid oncoming traffic while making a left turn.

## 2 FAILURE CASES

Fig. 2 shows some failure cases of AlphaDrive. The left sub-image shows the model not recognizing the green traffic light and fails to start in a timely manner. The right sub-image shows the model missing a right turn into a side road due to insufficient navigation information.