

# A Model-agnostic Hierarchical Framework towards Trajectory Prediction

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# Research Objectives

- Propose a model-agnostic hierarchical framework towards trajectory prediction.
- Leverage all the information could be beneficial to get more accurate trajectory prediction.

# Research Method

- Distinguishing all the information in a fine-grained way.
- In the first-level view, inter-trajectory view, a trajectory difficulty measure module is proposed to define trajectory difficulty to train the proposed model in an “easy-to-hard” schema.
- In the second-level view, intra-trajectory view, local feature extraction module, global feature extraction module and trajectory generation module are proposed to distinguish between global and local features in each trajectory sample, and handle them in different ways.

# Research Results

- Our method can improve the performance of ADE/FDE significantly (An increase of more than 8%) over advanced models.
- We plan to capture velocity and consider boundary problems in our future work for different agents in different scenes to achieve more accurate prediction results.

# Research Conclusions

- Making full use of the information contained in trajectory can significantly improve the effect of trajectory prediction model.
- Extensive experiments have demonstrated the effectiveness of our method.
- Information of agents, especially velocity, may be helpful to better explore the trajectory prediction task.
- We may also consider incorporating visual and contextual information for comprehensive multi-modal modeling.