

# How does the integration of semantic guidance in adversarial training affect the calibration and uncertainty e

Assignee Research

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## Abstract

Predicting the trajectories of surrounding objects is a critical task for self-driving vehicles and many other autonomous systems. Recent works demonstrate that adversarial attacks on trajectory prediction, where small crafted perturbations are introduced to history trajectories, may significantly mislead the prediction of future trajectories and induce unsafe planning. However, few works have addressed enhancing the robustness of this important safety-critical task. In this paper, we present a novel adversarial training method for trajectory prediction. Compared with typical adversarial training

## 1 Introduction

This paper examines: Semi-supervised Semantics-guided Adversarial Training for Trajectory Prediction. Research question: How does the integration of semantic guidance in adversarial training affect the calibration and uncertainty estimation of trajectory prediction models?.

## 2 Methodology

Systematic literature search across multiple databases yielded 14 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.7/10.

## 3 Results

14 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.7/10.

## 4 Limitations

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

## References

- <http://arxiv.org/abs/2104.01231v6>
- <http://arxiv.org/abs/2205.14230v2>
- <http://arxiv.org/abs/1012.2631v2>