

1. Ablation experiments of APD/FPD.

Table 1: Ablation study of APD/FPD on the ETH/UCY and SDD dataset.

Inv. Loss	Mixed Gaus.	Learnable Var.	Pred. Clustering	ETH/UCY		SDD	
				APD	FPD	APD	FPD
				0.39	0.76	14.82	27.22
✓				0.65	1.29	27.63	55.10
✓	✓			0.83	1.86	28.56	56.35
✓	✓	✓		0.81	1.79	24.84	48.78
✓	✓	✓	✓	1.19	2.48	31.56	64.52
			✓	0.41	0.80	15.52	28.50
✓			✓	0.68	1.35	22.07	41.28

2. Additional ablation experiments under "taking out Mixed Gaussian" condition.

Table 2: Ablation study of ADE/FDE on the ETH/UCY and SDD dataset.

Inv. Loss	Mixed Gaus.	Learnable Var.	Pred. Clustering	ETH/UCY		SDD	
				ADE	FDE	ADE	FDE
				0.30	0.55	10.00	16.59
✓				0.28 (↓0.02)	0.53 (↓0.02)	9.65 (↓0.35)	16.39 (↓0.20)
✓	✓			0.27 (↓0.01)	0.44 (↓0.09)	9.26 (↓0.39)	15.48 (↓0.91)
✓	✓	✓		0.25 (↓0.02)	0.40 (↓0.04)	9.20 (↓0.06)	14.78 (↓0.70)
✓	✓	✓	✓	0.21 (↓0.04)	0.34 (↓0.06)	7.74 (↓1.46)	12.17 (↓2.61)
			✓	0.27	0.44	9.05	15.11
✓			✓	0.24	0.35	7.89	13.01

3. Relationship between M predictions and APD/FPD.

Table 3: APD/FPD performance of FlowChain and MGF on ETH/UCY and SDD dataset when M varies.

M	FlowChain		MGF	
	ETH/UCY	SDD	ETH/UCY	SDD
10	0.37/0.72	14.05/25.88	0.97/2.18	31.96/65.54
20	0.39/0.76	14.81/27.23	1.02/2.28	31.50/64.39
30	0.40/0.77	15.05/27.68	0.99/2.23	30.62/62.29
40	0.40/0.78	15.18/27.91	0.97/2.16	29.85/60.47
50	0.40/0.78	15.25/28.03	0.95/2.11	29.46/59.45
60	0.40/0.78	15.29/28.10	0.93/2.07	29.00/58.34
70	0.40/0.79	15.31/28.12	0.91/2.03	28.78/57.75
80	0.40/0.79	15.34/28.19	0.90/2.01	28.54/57.10