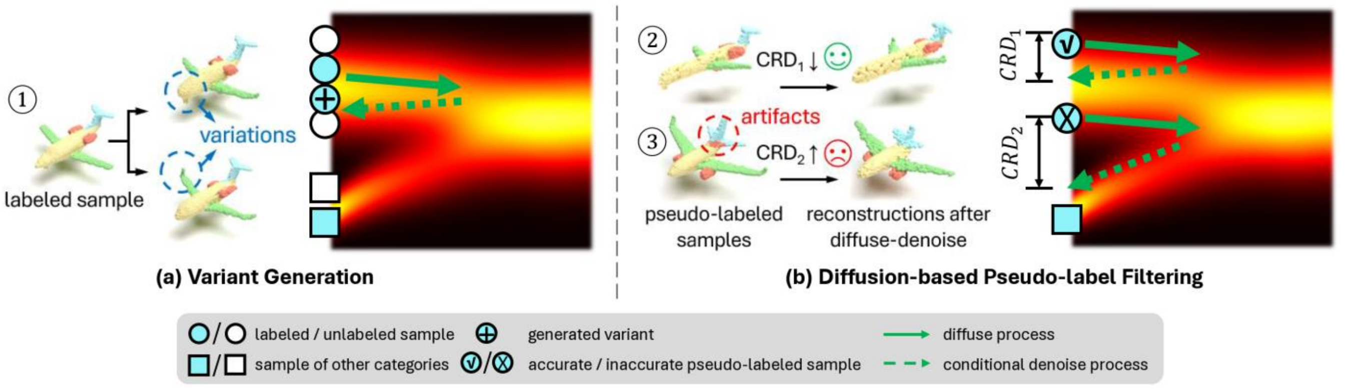
Generative Data Augmentation for Object Point Cloud Segmentation

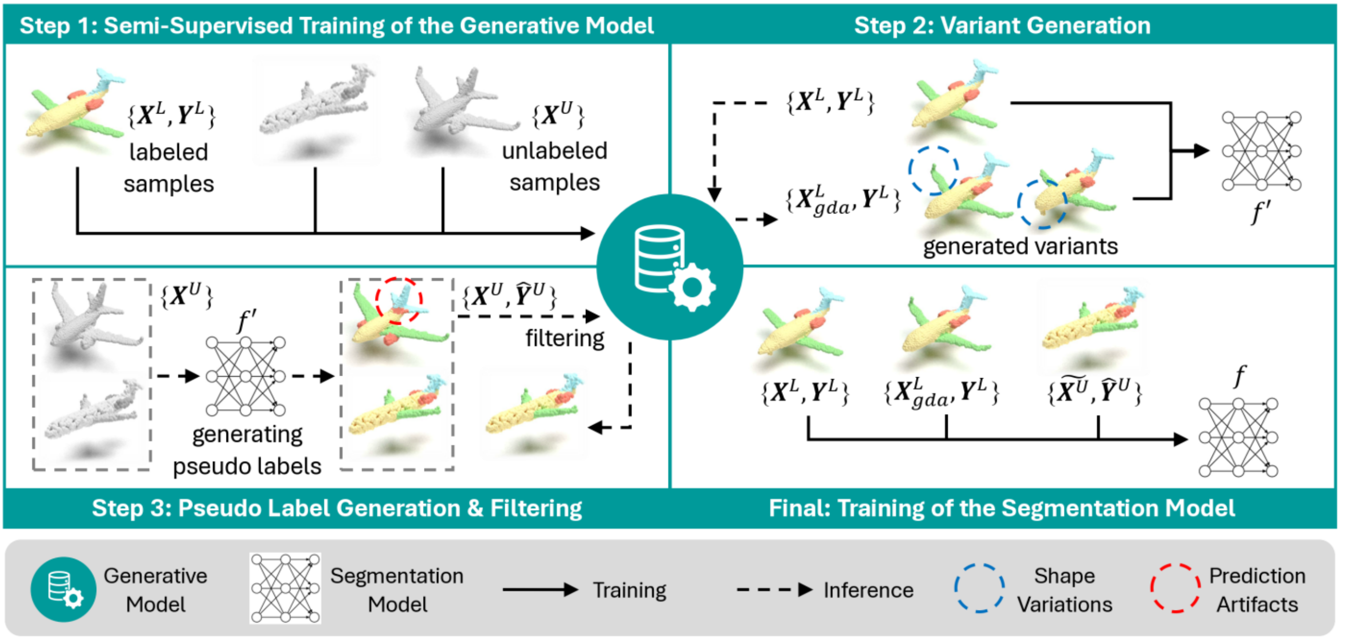
Dekai Zhu[1,2,3] Stefan Gavranovic[2] Flavien Boussuge[2] Benjamin Busam[1] Slobodan Ilic[1,2]

[1] Technical University of Munich [2] Siemens AG [3] Munich Center for Machine Learning

Methodology



Pipeline



Experiment Results

Dataset	ShapeNet					PartNet					IntrA
Category	Airplane	Car	Lamp	Motorbike	Pistol	Bed	Bottle	Chair	Faucet	Table	Aneurysm
FS	80.40	76.34	72.04	67.43	82.52	38.29	52.91	60.66	53.19	58.07	-
w/o aug.	76.46	70.09	66.04	56.10	77.66	27.36	40.99	51.69	40.01	46.28	37.49
only TDA	76.84	71.48	66.71	59.03	78.91	28.19	43.06	53.25	46.20	47.89	42.29
CL [13]	76.49	71.69	66.78	59.64	79.10	29.00	47.49	53.44	47.19	50.36	43.63
ReCon [29]	77.12	74.51	66.89	65.45	80.93	30.88	49.37	58.65	47.59	51.02	47.37
Point-CMAE [30]	77.46	74.45	68.23	**65.57**	81.02	31.53	49.54	**59.23**	47.26	**51.17**	47.21
GDA (VG)	77.96	72.90	66.79	61.44	80.01	30.69	50.14	56.40	49.25	50.22	46.85
GDA (VG+FP)	**78.32**	**74.89**	**71.22**	64.67	**81.35**	**32.96**	**53.21**	58.72	**50.31**	50.42	**48.67**

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