

# Models for 3D semantic segmentation

Lokesh Veeramacheneni

September 10, 2021

Name	# Parameters(in millions)	meanIOU(%)
PointNet	3	14.6
SPGraph	0.25	20.0
PointNet++	6	20.1
SPLATNet	0.8	22.8
Squeezeseg	1	29.5
TangentConv	0.4	35.9
Squeezeseg V2	1	39.7
SalsaNet	6.6	45.4
RangeNet21	25	47.4
RangeNet53	50	49.9
RangeNet53++	50	52.2
LatticeNet <sup>1</sup>	-	52.9
RandLA-Net	0.95	53.9
PolarNet	14	54.3
3D MiniNet	4	55.8
Squeezeseg V3	-	55.9
SalsaNext	6.7	59.5
KPRNet <sup>2</sup>	243	63.1
Af2S3Net <sup>3</sup>	-	70.8

Table 1: List of models in 3D semantic segmentation, meanIOU is reported on SemanticKITTI dataset. Rows highlighted in cyan are point based methods where as others are projection based methods.

---

<sup>1</sup>Code in different language

<sup>2</sup>Resnet101 backbone

<sup>3</sup>No code available

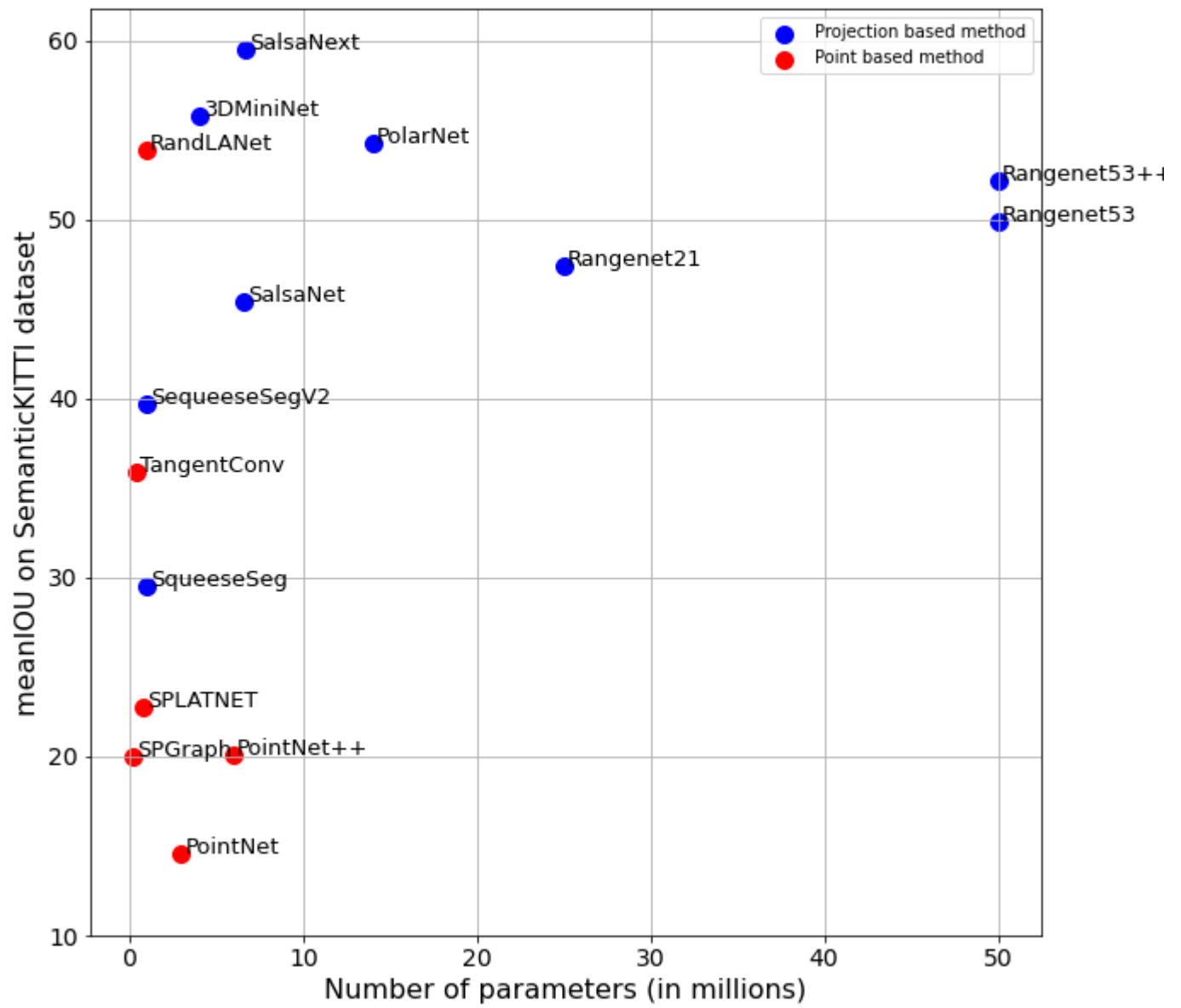


Figure 1: Model performance vs number of parameters on semantic KITTI dataset