3D Indoor Scene Long Tail Segmentation

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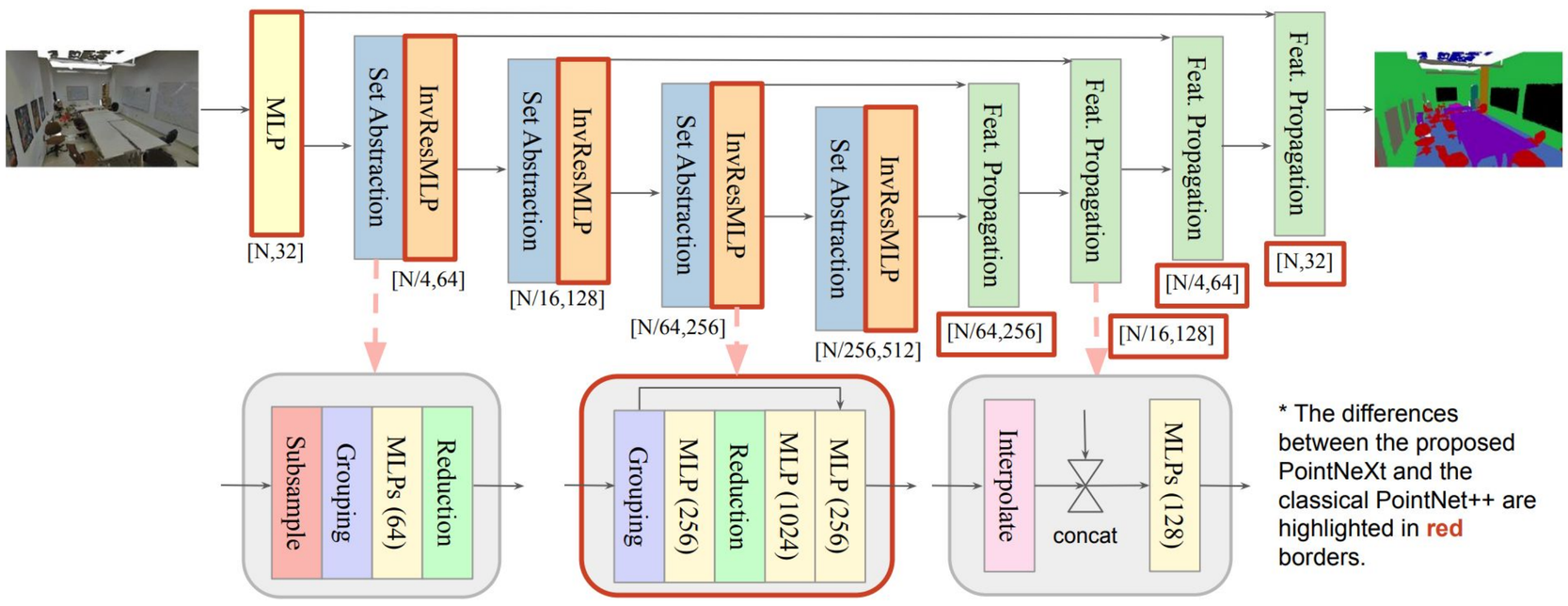
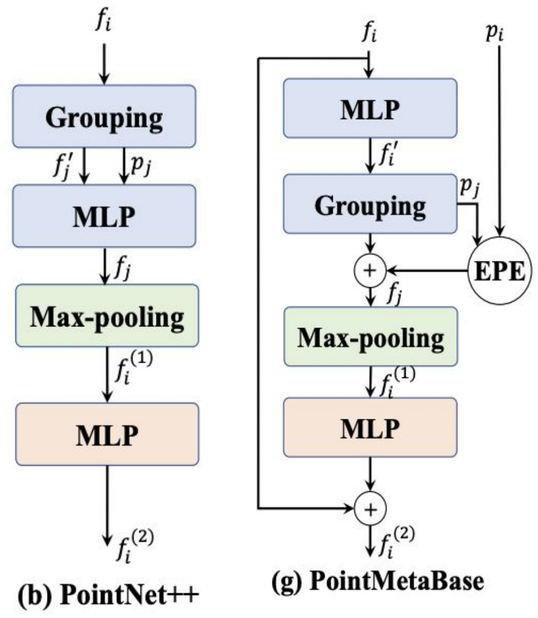
Model Architecture





Settings

- lr : 0.001
- Optimizer : AdamW
- Scheduler : Multistep
- Batch Size : 4
- Data Augmentation
  - Random Rotate Z-axis (0° ~ 180°)
  - Random Scale (0.8 ~ 1.2)
  - Color Auto Contrast (p = 0.2)
  - Random Drop Feature (p = 0.2)
- Loss Function : Cross Entropy、Focal Loss

$$\mathcal{L}_{focal} = -\sum_{i=1}^{200} \alpha_i (1 - p_i)^{\gamma} \log(p_i)$$

$$\alpha_i = 200 \frac{\frac{1}{r_i}}{\sum_{i=1}^{200} \frac{1}{r_i}} \qquad r_i = \frac{N_i}{\sum_{i=1}^{200} N_i} \qquad \gamma = 1$$

Comparison

Submission ID	25	28	32
Score	17.78	24.12	25.10
Description	Focal loss / 160 ep	Cross Entropy / 125 ep	Cross Entropy / 125 ep Focal loss / 3 ep