

# Model

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## cvt\_io\_v1\_1 :

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latent array: N = 10, L = 6, self attention shape: [b, n, d, H, W]

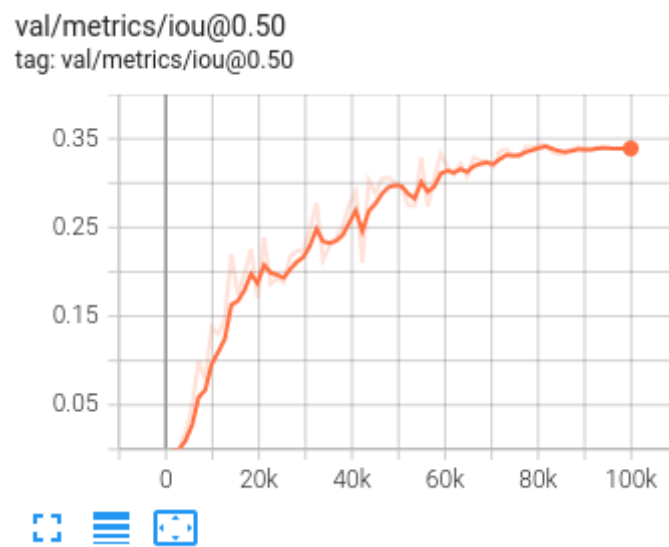
100K steps, lr: 4e-3, wd: 1e-7

## cvt\_io\_v2\_1 :

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latent array: N = 10, L = 6, self attention shape: [b, d, H, W]

100K steps, lr: 4e-3, wd: 1e-7

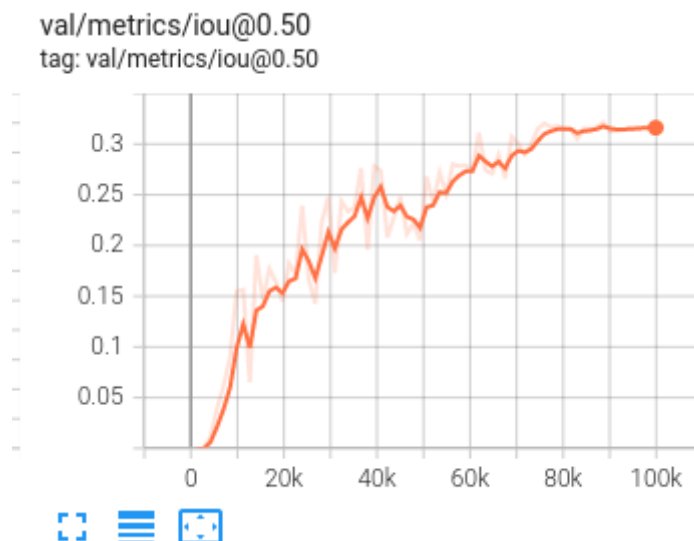


## cvt\_io\_v2\_2 :

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latent array: N = 5, L = 6, self attention shape: [b, d, H, W]

100K steps, lr: 4e-3, wd: 1e-7



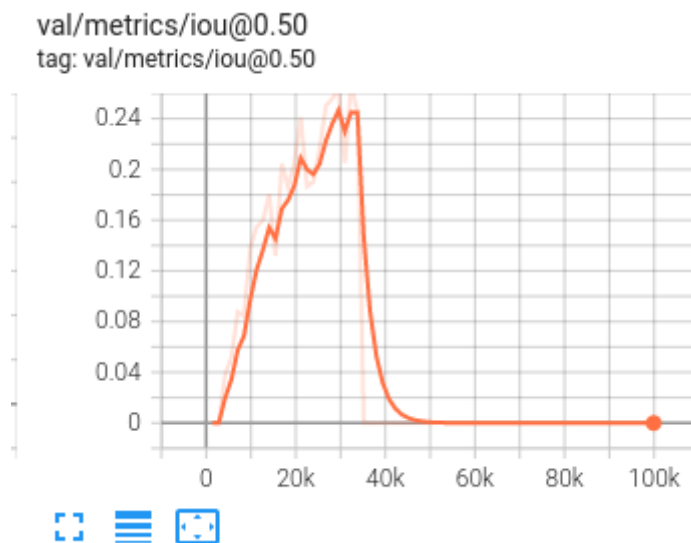
## cvt\_io\_v2\_3:

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latent array:  $N = 10$ ,  $L = 6$ , self attention shape:  $[b, d, H, W]$ , self attention不共享权值

100K steps, lr:  $4e-3$ , wd:  $1e-7$

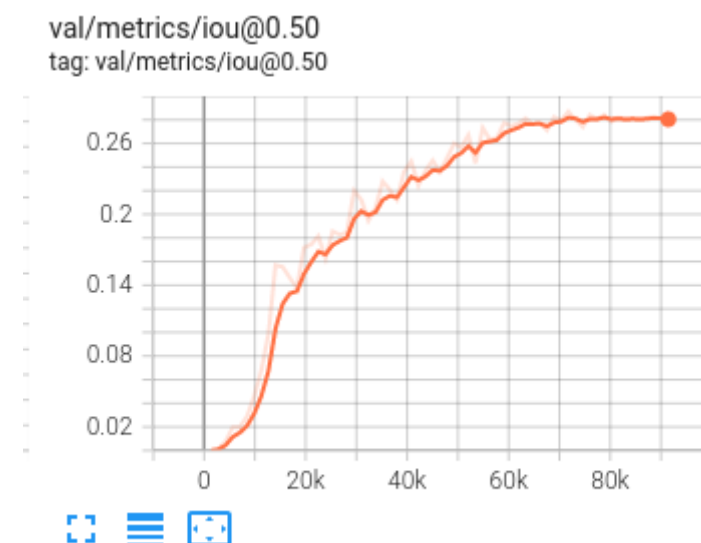
梯度爆炸, loss突然暴涨, 不收敛



## cvt\_io\_v2\_4:

latent array:  $N = 10$ ,  $L = 6$ , self attention shape:  $[b, d, H, W]$ , self attention不共享权值

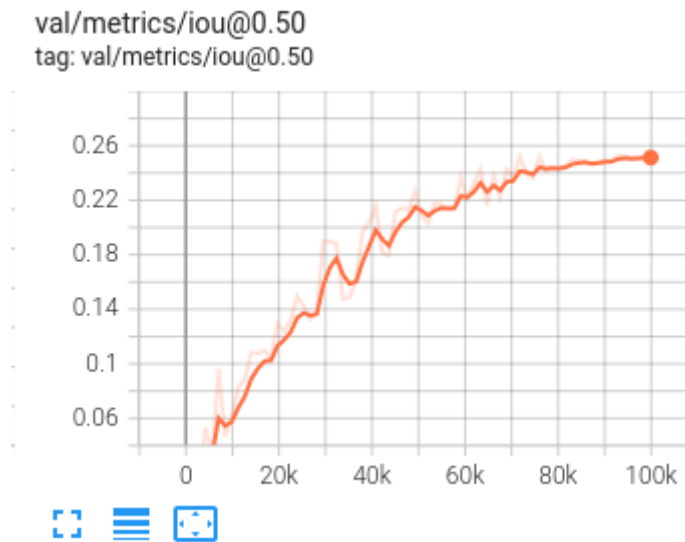
100K steps, lr:  $1e-3$ , wd:  $1e-7$



## cvt\_io\_v2\_5:

latent array:  $N = 3$ ,  $L = 1$  (实验设置出错), self attention shape:  $[b, d, H, W]$ , self attention共享权值

100K steps, lr:  $4e-3$ , wd:  $1e-7$



## cvt\_io\_v2\_6:

latent array: N = 5, L = 12, self attention shape: [b, d, H, W], self attention共享权值

100K steps, lr: 4e-3, wd: 1e-7

30k steps之后nan了, cost-time34.12ms, 可以看出self-attention是真不怎么耗时

## cvt\_io\_v2\_7:

latent array: N = 5, L = 10, self attention shape: [b, d, H, W], self attention共享权值

100K steps, lr: 2e-3, wd: 1e-7

## cvt\_io\_v2\_8:

latent array: N = 3, L = 6, self attention shape: [b, d, H, W], self attention共享权值

100K steps, lr: 4e-3, wd: 1e-7

## cvt\_io\_v2\_9:

latent array: N = 5, L = 4, self attention shape: [b, d, H, W], self attention共享权值

100K steps, lr: 4e-3, wd: 1e-7

	IOU@0.50	Params	FLOPs	Cost-Time
cvt	0.36	670.32K	6.934G	46.67ms
cvt_io_v1_1	0.34	936.94K	7.438G	36.91ms
cvt_io_v2_1	0.34	936.94K	6.918G	35.17ms
cvt_io_v2_2	0.328	936.94K	6.81G	33.08ms
cvt_io_v2_5	0.25	936.94K	6.78G	29.8ms
cvt_io_v2_7	0.28			
cvt_io_v2_8	0.26			