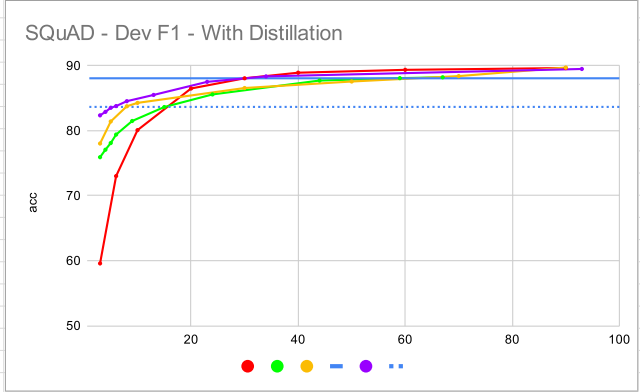
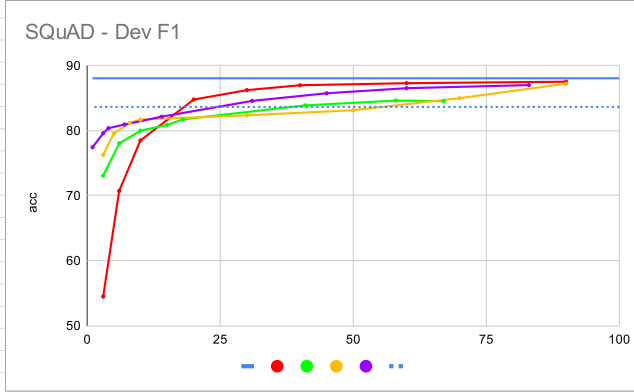


bert-base-uncased/92/squad		seed=92	squad-1.1 - dev		Learning Rate			Scheduling				Pruning			Regularization		Distillation						
Model	EXP ID	Effective encoder remain weights %	EM	F1	per_gpu_train_batch_size	warmup_steps	num_training_epochs	learning_rate	mask_probs_learning_rate	initial_threshold	final_threshold	initial_warmup	final_warmup	pruning_method	mask_in	mask_scale	regularization	final_lambda	teacher_type	teacher_name_or_path	alpha_c	alpha_distil	
bert-base-uncased-finetuned-squad	bert-base-uncased		80.42	88.07	16	5400	3	3.00E-05															
E4	ll_with_distill_0_0_1_1_2_1l_*_3e-5_1e-2_4	8.4	76.22	84.55	16	5400	10	3.00E-05	1.00E-02	0.00E+00	1.00E-01	1	2	sigmoid	constant	0	11	800	bert	bert-base	0.1	0.9	
E4	ll_with_distill_0_0_1_1_2_1l_*_3e-5_1e-2_4	6.2	74.99	83.80	16	5400	10	3.00E-05	1.00E-02	0.00E+00	1.00E-01	1	2	sigmoid	constant	0	11	1100	bert	bert-base	0.1	0.9	
E4	ll_with_distill_0_0_1_1_2_1l_*_3e-5_1e-2_4	4.7	74.65	83.53	16	5400	10	3.00E-05	1.00E-02	0.00E+00	1.00E-01	1	2	sigmoid	constant	0	11	1400	bert	bert-base	0.1	0.9	
E4	ll_with_distill_0_0_1_1_2_1l_*_3e-5_1e-2_4	3.7	73.67	82.90	16	5400	10	3.00E-05	1.00E-02	0.00E+00	1.00E-01	1	2	sigmoid	constant	0	11	1700	bert	bert-base	0.1	0.9	
Soft Movement	ll_with_distill_0_0_1_1_2_1l_*_3e-5_1e-2_4	3.1	72.84	82.37	16	5400	10	3.00E-05	1.00E-02	0.00E+00	1.00E-01	1	2	sigmoid	constant	0	11	2000	bert	bert-base	0.1	0.9	
W Distillation	ll_with_distill_0_0_1_1_2_1l_*_3e-5_1e-2_4	2.6	72.09	81.74	16	5400	10	3.00E-05	1.00E-02	0.00E+00	1.00E-01	1	2	sigmoid	constant	0	11	2300	bert	bert-base	0.1	0.9	

Category	HP Name	HP Explanation
	per_gpu_train_batch_size	Batch size per GPU/CPU for training.
	warmup_steps	Linear warmup over warmup_steps.
	num_train_epochs	Total number of training epochs to perform.
	max_seq_length	The maximum total input sequence length after WordPiece tokenization. Sequences longer than this will be truncated.
Learning Rate	learning_rate	The initial learning rate for Adam.
	mask_scores_learning_rate	The Adam initial learning rate of the mask scores.
Scheduling	initial_threshold	Initial value of the threshold (for scheduling).
	final_threshold	Final value of the threshold (for scheduling).
	initial_warmup	Run `initial_warmup` * `warmup_steps` steps of threshold warmup during which threshold stays at its `initial_threshold`.
	final_warmup	Run `final_warmup` * `warmup_steps` steps of threshold cool-down during which threshold stays at its `final_threshold`.
Pruning	pruning_method	Pruning Method (l0 = L0 regularization, magnitude = Magnitude pruning, topK = Movement pruning, sigmoied_threshold = Sigmoid pruning).
	mask_init	Initialization method for the mask scores. Choices: constant, uniform, kaiming.
	mask_scale	Initialization parameter for the chosen initialization method.
Regularization	regularization	Add L0 or L1 regularization to the mask scores.
	final_lambda	Regularization intensity (used in conjunction with `regularization`).
Distillation	teacher_type	Teacher type. Teacher tokenizer and student (model) tokenizer must output the same tokenization. Only for distillation.
	teacher_name_or_path	Path to the already SQuAD fine-tuned teacher model. Only for distillation.
	alpha_ce	Cross entropy loss linear weight. Only for distillation.
	alpha_distil	Distillation loss linear weight. Only for distillation.



	A		B1		B2		B3		B4		C2		C4		D1		D2		D3		D4		E2		E4			
	EM	F1	EM	F1	EM	F1	EM	F1	EM	F1	EM	F1	EM	F1	EM	F1	EM	F1	EM	F1	EM	F1	EM	F1	EM	F1		
100	80.4	88.1																										
99																												
98																												
97																												
96																												
95																												
94																												
93																									82.6	89.5		
92																												
91																												
90	80.4	88.1	79.0	87.5	79.0	87.6	82.7	89.7	82.7	89.7					78.6	87.2	78.3	87.0	82.8	89.7	82.6	89.5						
89																												
88																												
87																												
86																												
85																												
84																												
83																												
82																												
81																												
80	80.4	88.1																										
79																												
78																												
77																												
76																												
75																												
74																												
73																												
72																												
71																												
70	80.4	88.1													76.1	85.0	75.7	84.9	81.1	88.4	81.6	88.6						
69																												
68																												
67											75.0	84.6	80.8	88.2														
66																												
65																												
64																												
63																												
62																												
61																												
60	80.4	88.1	78.8	87.3	78.4	87.2	82.5	89.4	82.6	89.6																		
59															80.5	88.1												
58											75.2	84.6																
57																												
56																												
55																												
54																												
53																												
52																												
51																												
50	80.4	88.1													73.2	83.2	73.5	83.1	79.8	87.6	80.0	87.5						
49																												
48																												
47																												
46																												
45																												
44															80.1	87.7												
43																												
42																												
41															74.3	83.9												

83.67108917

